

A Report
on
A SURVEY OF THE REASONS FOR INDUSTRIAL MIGRATION
IN THE
"IRONBOUND" AREA OF NEWARK

Prepared for

Professor Tsirk
Newark College of Engineering
Newark, New Jersey

by

Timothy J. Hinrichs
William Kaminski
May 21, 1974

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506 First Street
Carlstadt, New Jersey
May 21, 1974

Professor Tsirk
Department of Civil Engineering
Newark College of Engineering
Newark, New Jersey

Dear Professor Tsirk:

8/30/93-
The accompanying report, entitled A Survey of the Reasons for Industrial Migration in the Ironbound Area of Newark, is submitted in accordance with your instructions of January 23, 1974.

The primary purpose of the report is to present the results of a survey of the reasons for industrial migration from the Ironbound area of Newark. An effort has been made to cover this subject thoroughly, including a discussion of the survey and how it was conducted, and an in depth analysis of its results.

We wish to acknowledge the information and assistance given us by Mr. Alfred Shapiro of the Newark Urban Planning Board, Mr. Larry Dolan of the Greater Newark Chamber of Commerce, and Dr. Frederick Lehman, our project advisor.

We sincerely hope that this report will meet with your approval.

Respectfully yours,

Timothy Hinrichs
William Kaminski
Timothy Hinrichs
William Kaminski

Abstract

The "Ironbound" area in Newark is Newark's largest industrial area. It is composed of numerous industries and predominately two and three story dwellings in which the workers live. The workers and their families are of a large variety of different ethnic backgrounds. These people live together, in this area, with a strong sense of community unity and pride.

A problem is now beginning to materialize. Many of the industries which employ the "Ironbound" workers are beginning to move out of Newark. This migration is creating a highly unfavorable situation in the city. The city is suffering a substantial loss of revenue due to the reduction of the industrial tax base, and the workers are beginning to move in search of employment. The result of these tendencies may be the dissolution of a community which has an attitude that can only benefit the redevelopment of Newark.

In working towards a possible solution to the problem of industrial migration out of Newark the problems causing this migration must first be isolated. By using a questionnaire survey listing most of the problems a company can face several problems should apply to each company completing the questionnaire. When a representative response is received from the companies in the area, analysis can begin. With the use of a computer highly sophisticated sorting can be rapidly preformed. When the sorting is completed a few major problems may be isolated. Thus by using scientific techniques the problems may be clearly defined, this done possible solutions can be recommended.

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Introduction

The Ironbound area of Newark is that area of the city in which a major part of Newark's industry is located. Referring to the map on the following page, it is that part of the city which is bordered to the west by Route 21, to the East and North by the Passaic River, and to the South by Port Newark. According to the 1973 industrial registrar, 317 of the 907 industries located in Newark are located in the Ironbound area. ~~NEWARK is located in the Ironbound area. The industries in~~ Thus, 35.1% of all the industry in ^{this} area widely vary and the chief products they manufacture include chemicals, varnishes, paints, lubricating oil, electrical machinery and equipment, machinery and machinshop products, metal products, radio equipment, leather goods, paper boxes, and bakery products. These industries employ a total of 17,950 people, and therefore serve as a major source of employment for the inhabitants of Newark and its suburbs, and also as a major source of tax revenue for the city itself. They therefore must be considered an important factor influencing the welfare of Newark and its inhabitants.

During the last few decades, industries have been leaving the Ironbound area at an alarming rate. This industrial migration represents one of the major problems presently confronting the city of Newark. It is the purpose of this paper to discuss the results of a survey which these authors conducted of the reasons for industrial migration from the Ironbound area. It is hoped that these results will be of major assistance to Newark, in dealing with ^{this} growing problem.

W.C.

S.O.



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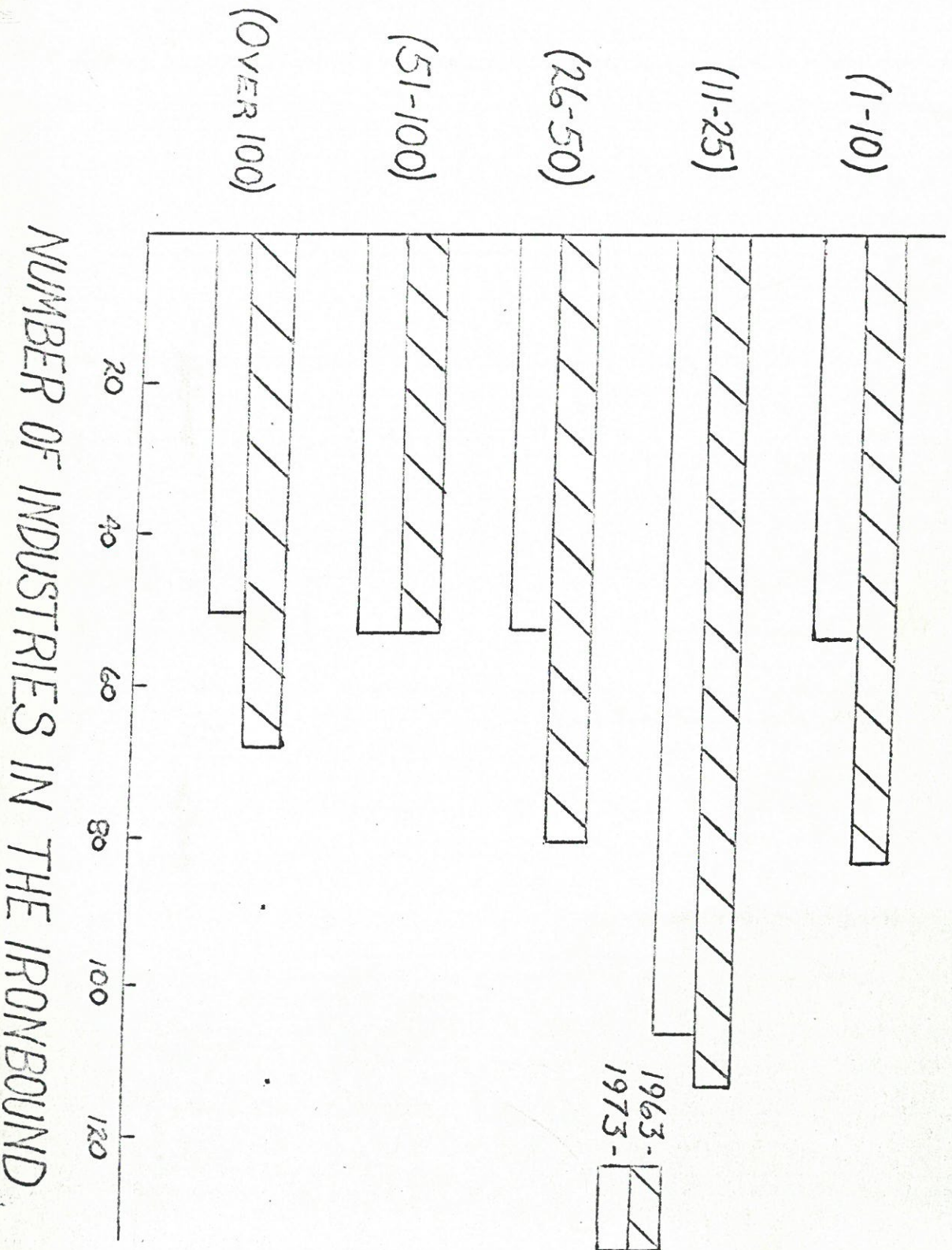
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I. Industrial Migration from the Ironbound Area

As has been stated, industrial migration from the Ironbound area represents one of the major problems presently facing Newark. Of the 391 firms which were located in this area in 1963, only 165 have remained. While between 1963 and 1973, 152 new industries have entered the area, 226 industries have left. This represents ^{an} 18.9% drop in the Ironbound's industrial population. Furthermore, while the new firms which have entered the area since 1963 employ some 8,689 people, the firms which have left employed 17,472 people. This has led to the total number of people employed by the Ironbound industries dropping from 26,713 to 17,930 in this ten year period; representing a decline in the total number of jobs provided of 32.8% from the 1963 level. Figure 2 on the following page shows the distribution of the Ironbound industries according to their employment size for the years 1963 and 1973. This figure reveals that the greatest loss in population has occurred in those firms which employ 1 to 10, 26 to 50, and over 100 people. The number of firms which employ 11 to 25 and 51 to 100 people, on the other hand, have decreased very slightly or not at all, and therefore represent the most stable industries with respect to size in the area.

As a further indication of the decreasing size of the Ironbound industries, the following statistic is of particular interest. The Ironbound industries, in 1963, each employed on the average 66.8 people. Over the next ten years, this figure has dropped to 55.6 people per industry. Thus, it

Fig 2 BREAKDOWN OF INDUSTRIES IN THE IRONBOUND
BY THEIR EMPLOYMENT SIZE



seems evident that not only are the industries in the Iron-bound area growing fewer, but they are also growing smaller.

II. Conducting the Survey

To determine the reasons for industries leaving the Ironbound area, it was decided that a survey of these industries regarding the problems which they were presently encountering should be conducted. To obtain a general idea of the basic problems experienced in the Ironbound area, this project group met with Mr. Alfred Schapiro of the Newark Urban Planning Board, Mr. Larry Dolan of the Greater Newark Chamber of Commerce, and a representative of the Investors Funding Corporation of America, who are the developers of the Newark Industrial Plaza. Their knowledge of the subject proved invaluable and with their suggestions and advice, and this groups general knowledge of Newark and its problems, a comprehensive questionnaire was developed.

The Questionnaire

The questionnaire consisted of 39 questions which were all of a multiple choice format. It was designed to be easily understood and take not more than ten minutes to fill out. The questionnaire consisted of two parts; one which dealt with general industrial characteristics such as industry type, employment size, length of residence in the Ironbound area, building age, etc., and a second part which dealt with reasons for industries originally entering the Ironbound area and problems which they were presently encountering with the Ironbound location. It is the second part of the questionnaire which is of major importance since it is the object of the survey to determine causes of industrial moveout from the region.

Two alternatives were provided for in answering questions concerning problems with the Ironbound area and reasons for originally entering it. Industries filling out the questionnaire could indicate by placing a checkmark in the appropriate column whether a statement dealing with either one of these two questions was of major or minor importance. This feature of the questionnaire was installed to give responding industries a choice as to the degree of importance of a particular question. Thus, industries could indicate those problems which were not presently of major concern, but which still existed. It was hoped that by designing this feature into the questionnaire, the members of the survey group could make a distinction between major and minor factors which promote industrial move out when analyzing questionnaire responses.

It was also decided that the questionnaire to be sent to the Ironbound industries should be anonymous. The Newark Chamber of Commerce felt, and we agreed, that the overall response would be higher if the firms surveyed were not asked to identify themselves. However, forms were supplied with the questionnaires on which firms could give their names, if they so desired, and also could indicate their willingness to be interviewed personally as a follow up to the survey. A sample of the questionnaire and the accompanying letter is located on the following pages.

Conducting the Survey

In conducting the survey, the members of this project group were extremely fortunate to receive the support of the Greater Newark Chamber of Commerce, which was of great

Greater Newark Chamber of Commerce

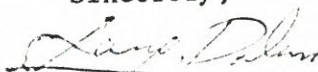
1180 Raymond Boulevard
Newark, New Jersey 07102
(201) 624-6888

Dear Sir:

As you know the continued health of the Ironbound business community is vital to the economy of Newark. We at the Greater Newark Chamber of Commerce are interested in developing a deeper understanding of the dynamics of the area so that we might adequately answer inquiries, especially those from industries thinking about locating there.

In order to do this we have developed a brief questionnaire. Would you please take five minutes, fill it out and return it in the enclosed envelope. We ask for no company identification, as the information is going to be used to provide the Chamber with a more adequate data base.

Sincerely,



Larry Dolan
Research Specialist

LD/ph

Enclosure

GREATER NEWARK CHAMBER OF COMMERCE IRONBOUND BUSINESS QUESTIONNAIRE

1. Type of Industry (SIC CODE)

Construction (15-17) _____	Wholesale (50) _____
Manufacturing (19-39) _____	Retail (52-59) _____
Transportation, Communica- tions, Public Utilities, Sanitation (40-49) _____	Finance, Insurance, Real Estate (60-67) _____
	Services (70-89) _____

2. Approximately how many people do you employ?

1-10() 11-25() 26-50() 51-100() over 100 ()

3. What is the approximate percentage of blue collar workers employed?

0-10%() 11-25%() 26-50%() 51-75%() 76-100%()

4. How long have you been located in Newark?

1-5yrs.() 6-25yrs.() 26-50yrs.() over 50yrs.()

5. What were your reasons for locating in Newark?

Relative
Importance

major minor

A. Availability of a building which was suitable for your industry's needs.

() ()

B. Available labor force.

() ()

C. Good transportation facilities.
(Check those that apply)

a. Rail facilities

() ()

b. Port facilities

() ()

c. Air facilities

() ()

d. Highway facilities

() ()

e. Public transportation

() ()

D. Proximity to consumer market.

() ()

E. Proximity to complementary industries.

() ()

F. Proximity to financial institutions.

() ()

G. Proximity to institutions of higher learning.

() ()

H. Municipal services (police protection, fire protection, sewerage, etc.)

() ()

- 2 -

major minor

I. Adequate room for expansion.

() ()

J. Other (please specify)

() ()

6. Do you rent or own the building you now occupy?

Rent ()

Own ()

7. What is the approximate age of the building you now occupy?

1-5yrs. ()

6-25yrs. ()

26-50yrs. ()

over 50yrs. ()

8. What type of building do you presently occupy?

a. Single story ()

b. Two story ()

c. More than two story ()

9. What problems do you find with the Ironbound location?

Relative
Importance
major minor

A. Building is inadequate.

() ()

B. Insufficient room for expansion.

() ()

C. Unavailable labor force.

() ()

D. Rising tax rates.

() ()

E. Inadequate transportation facilities
(check those that apply)

a. Rail facilities

() ()

b. Port facilities

() ()

c. Highway facilities

() ()

d. Parking facilities

() ()

e. Public transportation

() ()

F. Insufficient room for loading and unloading.

() ()

G. High cost of building.

() ()

H. Distance from consumer market.

() ()

I. Distance from complementary industries.

() ()

J. Total cost of operation has become too high.

() ()

- 3 -

major minor

K. Municipal Services.

() ()

L. Cities reputation makes it difficult to attract
labor source

() ()

M. Other (please specify)

() ()

10. Are you considering relocating.

Yes()

No()

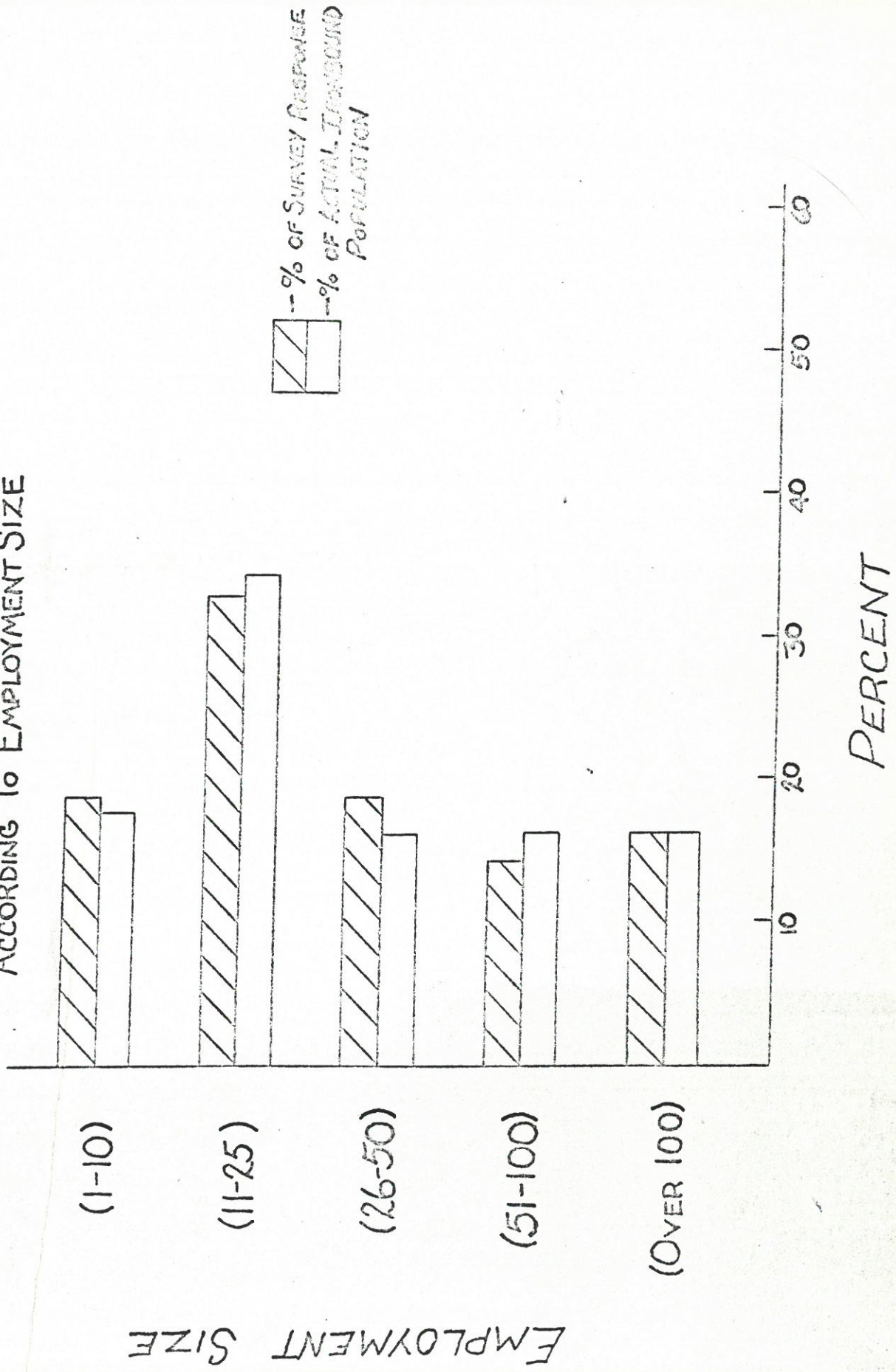
assistance in the printing, addressing, and mailing of the questionnaire to the Ironbound industries. The questionnaire itself was sent to the 317 industries listed as being in the Ironbound area by the Industrial Registrar on March 24, 1974. Within a period of three weeks, 92 of these 317 industries had responded to the survey, while an addition 16 industries had left the Ironbound area since the Industrial Registrar's last printing, leaving no forwarding address. Thus, the survey received a total response of 30.6%.

III. Validation of the Survey

When conducting a survey, the question of whether the survey is valid and the response received is representative of the entire survey area must be asked. As a check of the validity of the Ironbound survey, a breakdown of the responding firms by their employment size was compared with the employment size breakdown of the entire area. Figure 3 shows this comparison. As can be seen from this figure, the maximum deviation between those firms which responded and the total number of firms in the Ironbound area for any employment size was 2½%. Thus, by employment size, it is highly probable that the survey is relatively representative of the entire Ironbound industrial population.

Two possibilities of misrepresentation of the Ironbound area by the survey exist. The first of these is that the companies that did not respond did not do so because they are relatively satisfied with the Ironbound area and did not feel it necessary to fill out a questionnaire the purpose of which was to discover Ironbound grievances. The second possibility is that the firms not responding are totally disillusioned with the Ironbound area, and with Newark, and feel that not even the most negative of replies would succeed in promoting action; or have already made the decision to leave the Ironbound area, regardless of what action might be taken. In an attempt to check the views of the companies which did not respond, phone calls to the various firms in the Ironbound

VALIDATION OF OUR SURVEY ACCORDING TO EMPLOYMENT SIZE



area were made. The names of these industries were selected entirely at random from the New Jersey Industrial Registrar. It was hoped that through these phone calls, companies which did not answer the survey could be identified. These companies would then be asked why they failed to return the questionnaire and furthermore, to comment on any problems they were encountering in the Ironbound area. In this way it was hoped to discover the predominant feelings among these industries concerning their satisfaction or dissatisfaction with the Ironbound area. Of the thirty to forty firms which were contacted, however, the great majority did not know whether or not they had returned the questionnaire. They also commented that the reason for not returning the questionnaire, if they had failed to do so, was that they could not take the time to complete it.

Those companies which did not respond to the questionnaire and are satisfied with the Ironbound location will obviously have no effect on a survey the purpose of which is to discover some causes for industrial migration. Furthermore, it is the opinion of the members of this project group that those companies which did not respond and are considering relocating, are more than likely considering relocation for the same reasons as those companies which did respond. It is therefore felt that if such companies do exist, their lack of response has had no significant effects on the results of the survey.

IV. Criteria for Analysis

A basic criteria for the anyalysis of the survey results had to be developed before the actual analysis could begin. In developing this criteria, it was decided that the minor reasons which the industries gave for their satisfaction or dissatisfaction with the Ironbound area would be disregarded, since these reasons were considered to be only alternatives to no response, and therefore not of major consequence. It was also decided that a 33% response of "major importance" would be considered significant. Thus, a one out of three response of this nature to a particular question was considered by the members of this project group to be a problem^{—that} has been affecting a large enough percentage of the total industries in the Ironbound area to warrant the implementation of some sort of corrective action.

In conducting the actual analysis, the total response of all 92 companies which answered the survey was first investigated. The results of this investigation gave a general idea of the industrial characteristics in the Ironbound area and also their contentments or complaints with the area itself. The responses of those firms which gave an affirmative answer to the question concerning relocation were then analyzed separately. By looking at the responses of these firms, problems encountered in the Ironbound location which have led industries to consider relocation can be identified.

A further analysis of the results of the survey was conducted by separately investigating the responses of industries of different type, and employment size. In-addition-to

In analyzing the survey results in this manner, the project group hoped to discover trends concerning dissatisfactions with the Ironbound area for companies of different industrial characteristics.

V. Analysis of the Survey Results

To begin the anyalysis we have taken the total response to the questionnaire survey and compared the response received for each question to the total response to the survey. The maximum response in each category was then used in the formulation of a typical Ironbound company. The figures used to obtain this typical company can be reviewed in table 1. This typical company, or Company "T", is engaged in manufacturing. It employs somewhere between eleven and twenty five blue collar workers and has been located in the Ironbound area of Newark for a period of time ranging from six to twenty five years. The company owns the building it occupies, which is probably a single story building between twenty six and fifty years old. Like 74% of the companies in the Ironbound, they are experiencing some difficulties in the area, but, they are not considering leaving it. Why is company "T" located in the Ironbound? What are the problems they are currently experiencing there? Questions numbered five and nine on the survey answers these questions. Figures 4 and 5 on the following pages illustrate the response of the Ironbound industries to these questions.

In reference to comapny "T", its primary reasons for locating in Ironbound are the availability of a suitable building, available labor force, and the excellent highway facilities. Public transportation facilities, the proximity to a consumer market, and the proximity to a complementary industries were also of major concern. Municipal Services were

Table I. % Response to Selected Questions
by All Industries

<u>Type of Industry</u>	<u>Percent of Responses</u>
Manufacturing	73.8
Wholesale	8.87
Services	8.87
Construction	5.5
 <u>Number of Employees</u>	
11-25	36.6
1-10	18.5
26-50	18.5
Over 100	16.6
51-100	14.5
 <u>Percent of Blue Collar Workers</u>	
76-100	39.2
51-75	26.0
26-50	14.1
0-10	14.1
11-25	4.4
 <u>Years Located in Newark</u>	
6-25	46.8
26-50	26.0
Over 50	21.8
1-5	4.4

Do You Rent or Own The Building You Occupy ?Percent Of Response

Own	70.5
Rent	26.1

How Old is The Building You Occupy ?

years

26-50	42.4
Over 50	38.0
6-25	16.5
1-5	2.2

What Type of Building Do You Occupy ?

Single Story	43.5
Two Story	28.3
More Than Two Stories	27.2

Are You Considering Relocating ?

No	74.0
Yes	21.8

FIG. 4 RESPONSE OF ALL INDUSTRIES TO
REASONS FOR ENTERING THE IRONBOUND

REASONS FOR LOCATING IN THE "IRONBOUND" AREA

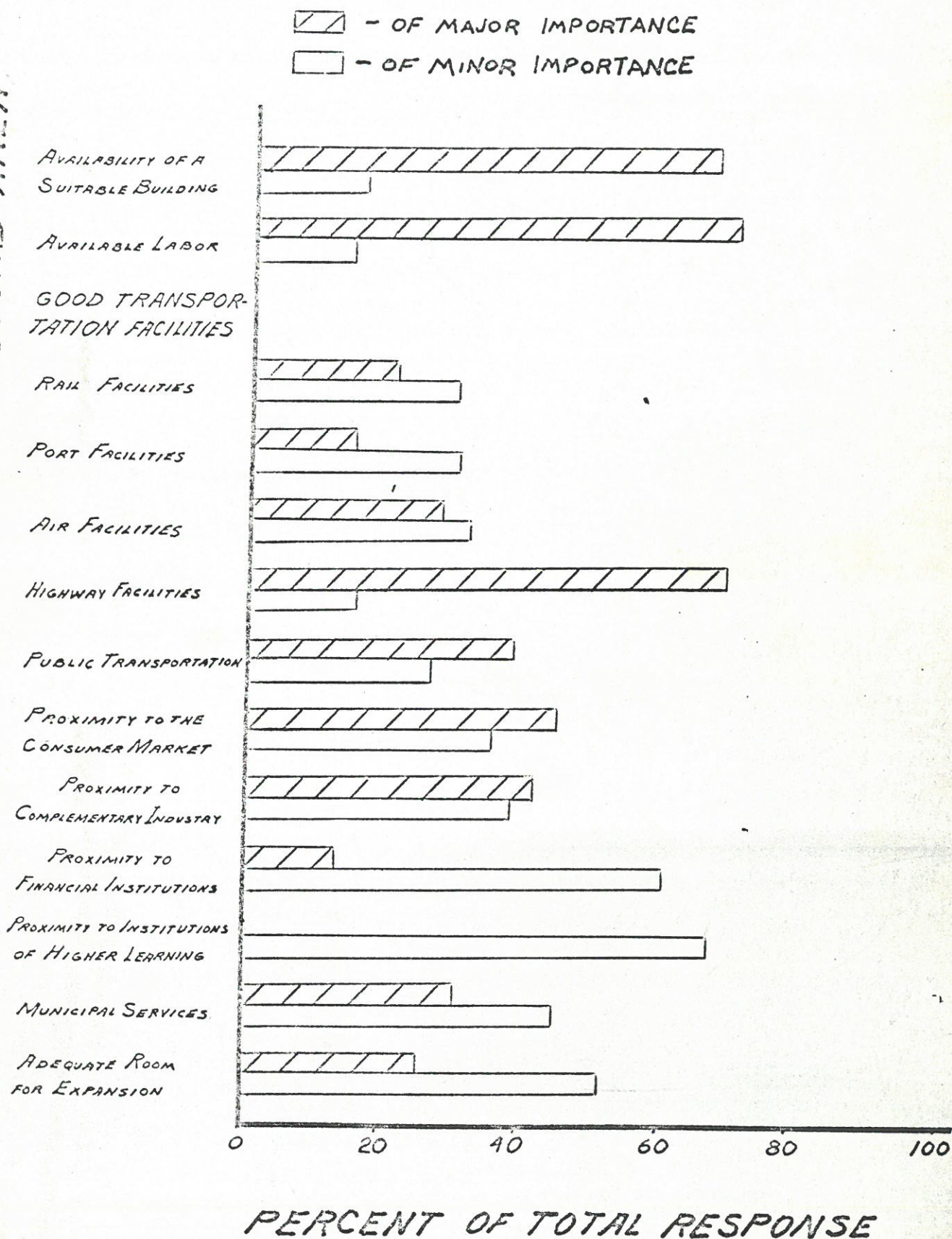
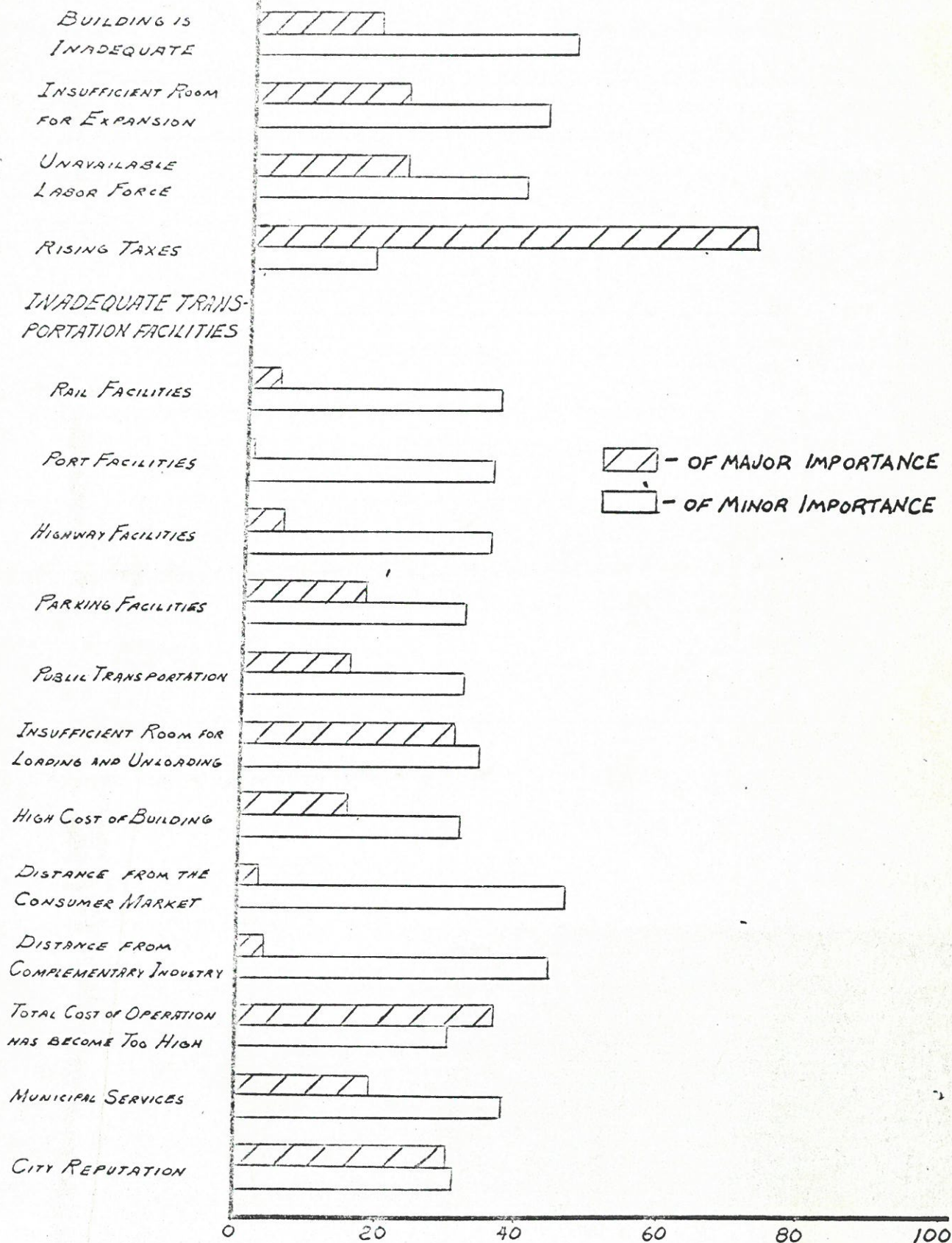


FIG. 5 RESPONSE OF ALL INDUSTRIES TO PROBLEMS IN THE IRONBOUND

22

PROBLEMS WITH THE "IRONBOUND" LOCATION



PERCENT OF TOTAL RESPONSE

considered important but were not significant in response. The problems company "T" now faces in its Ironbound location are reflected by the survey response to question nine. Company "T" found only two significant problems with the Ironbound location are reflected by the survey response to problems with the Ironbound location: 1- the tax rates are too high 2- the total cost of operation is becoming too high. The total cost of operation can be viewed in context of the rising tax rates and other major problems below the significant level. These lesser problems are insufficient room for loading and unloading, and the cities poor reputation, which makes it difficult to attract competent labor.

Analysis of the Industries Considering Relocation

The major concern of this survey is not company "T", but, the 21.8% of the companies surveyed which are considering moving out of the Ironbound area. For an analysis involving only the companies dissatisfied with the Ironbound area a sub sort routine was programmed on Newark College of Engineering's Univac computer. Joseph Civinski, a user assistant, was a considerable aid in the development of this program. (*) The result of this analysis is shown in Table 2 and figures 6 & 7. For discussion purposes we will again create a fictitious company using the same criteria as those used in creating company "T". This company will be called company "D". It is a company dissatisfied with the Ironbound location and considering relocating outside of Newark. Company "D" is a

* Appendix F shows the format of the computer program used.

manufacturing firm with any number of employees. A possible exception in employment size would be in the 26-50 employee size, of which only 5% were dissatisfied with the Ironbound area. The probability is greater than 50% that company "D" employs 76 to 100% blue collar workers. It has been located in the Ironbound area for at least six years and owns the building it occupies. The building company "D" occupies is now at least twenty six years old. Why did company "D" locate in the Ironbound area? The strongest reasons were availability of a suitable building and available labor force. Other reasons taken into consideration were transportation facilities, proximity to the consumer market, proximity to financial institutions, and adequate room for expansion. Figure 6 shows the relative importance of expansion. Why is company "D" dissatisfied? The most obvious reason is the high Newark tax rate; this opinion is shared by company "T". The other significant reasons are building inadequacy, insufficient room for expansion and the unavailability of a labor force. These responses are considerably above the responses of the typical company and in direct opposition to the companies reasons for locating in Ironbound. Other problems approaching major significance are insufficient room for loading and unloading and the Newark reputation, which makes it difficult to attract the desired labor force.

To summarize this response, which is the most conclusive finding of the survey:

1. The firms considering relocation originally moved into the Ironbound area for the reasons of: a) available buildings

Table II
INDUSTRIAL CHARACTERISTICS OF COMPANIES CONSIDERING RELOCATING

<u>Type of Industry</u>	<u>Percent of Response</u>
Construction	0.0
Manufacturing	80.0
Wholesale	5.0
Services	5.0

<u>Size by Number of Employees</u>	
1-10	25.0
11-25	25.0
26-50	5.0
51-100	25.0
Over 100	20.0

<u>Percentage of Blue Collar Workers</u>	
0-10%	10.0
11-25%	5.0
26-50%	10.0
51-75%	25.0
75-100%	50.0

Time Located in "Ironbound" (years)Percent of Response

1-5	0.0
6-25	35.0
26-50	40.0
Over 50	25.0

Rent or Own Building of Occupancy

Rent	30.0
Own	70.0

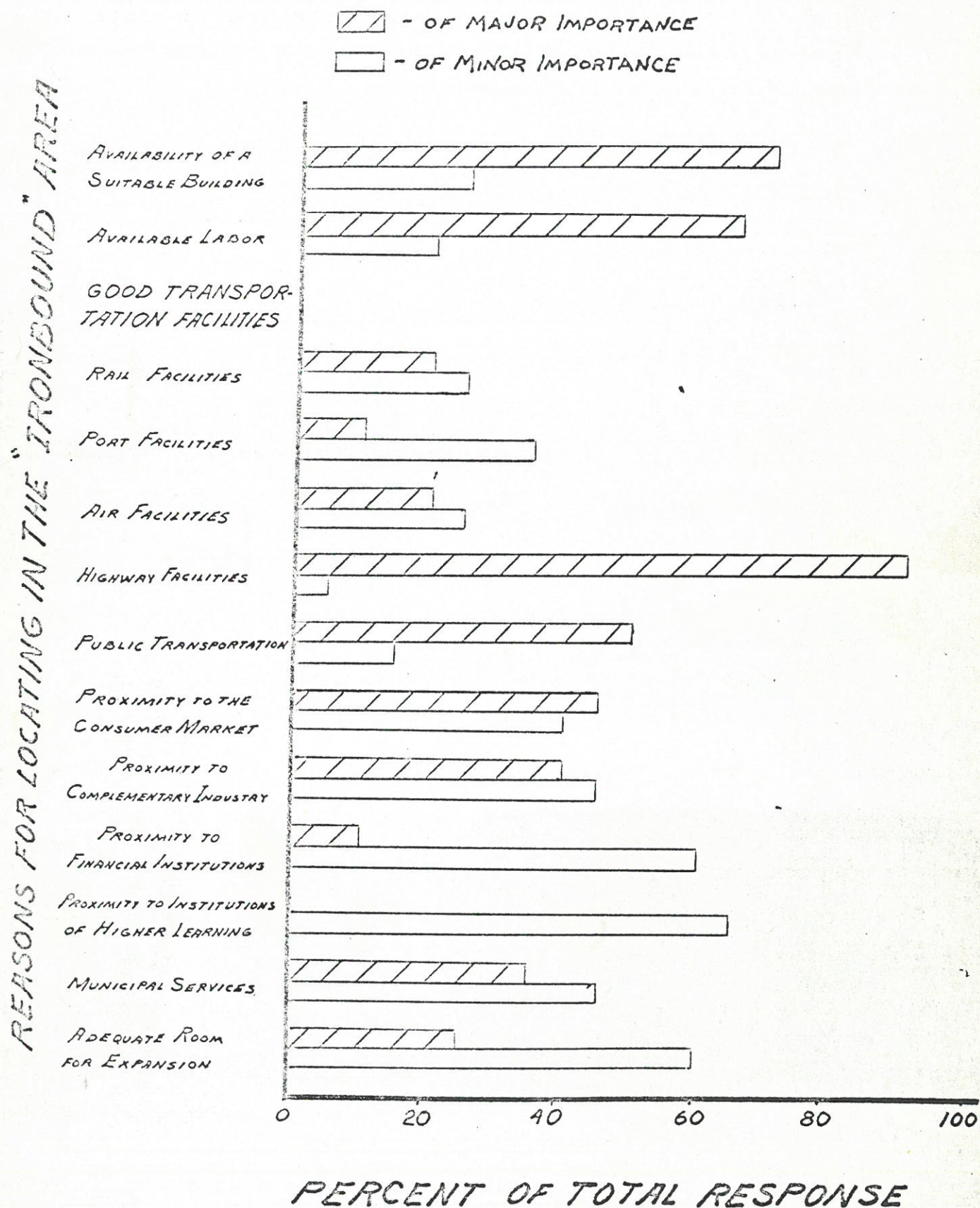
Type of Building Occupied

Single Story	55.0
Two Story	10.0
More Than Two Stories	35.0

Age of Building of Occupancy (years)

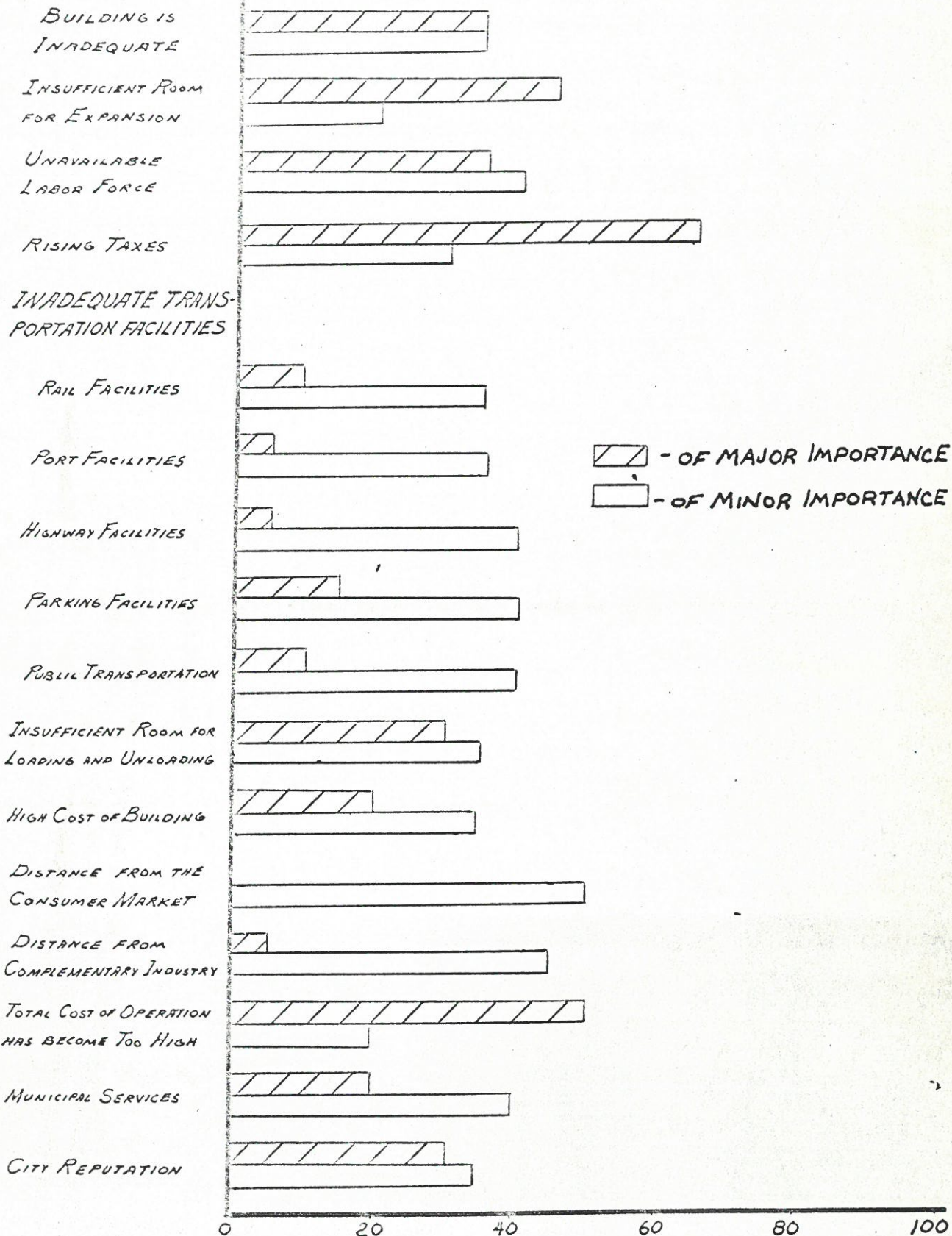
1-5	0.0
6-25	10.0
26-50	45.0
Over 50	45.0

Fig.6 RESPONSE TO REASONS FOR ENTERING THE IRONBOUND BY COMPANIES CONSIDERING RELOCATION



COMPANIES CONSIDERING RELOCATION

PROBLEMS WITH THE "IRONBOUND" LOCATION



PERCENT OF TOTAL RESPONSE

suitable to the company's needs; b) adequate room for expansion; c) available labor force.

2. The majority of the firms in Ironbound are not newly located. They have been located in Newark for at least 26 years.

3. Ninety percent of the firms now occupy buildings which are 26 years old or older.

4. The major problems include: a) insufficient room for expansion; b) unavailable labor; c) the total cost of operation is becoming too high.

In conclusion, when studying the firms which are considering leaving Newark, it can be seen that their dissatisfaction is due predominately to the deterioration of the facilities which originally influenced their decision to locate in Newark.

Analysis by Type of Industry

An analysis of the survey responses by industry type was conducted in the hope of finding general satisfactions or dissatisfactions with the Ironbound area which were unique to different types of industry. The types of industry for which this investigation was conducted were construction, manufacturing, wholesale, and services, since only these four received sufficient responses to justify such an analysis. Table A1 in Appendix A gives the responses of industries in the Ironbound area by their type to selected questions dealing with industrial characteristics. This table shows that the largest percentage of construction firms employ between 11 and 50 people; manufacturing and wholesale industries between 11 and 25 people, and those industries engaged in providing a

service between 1-10 people. While the percentage of blue collar workers employed is evenly distributed from 0 to 100 for construction firms, the majority of the manufacturing firms employ 75 to 100%, the wholesale firms 51 to 75%, and the industries engaged in services 0 to 10%, blue collar workers. Differences also arise in the average number of years each type of industry has been located in the Ironbound area. However, the vast majority of industries of all four industry types have been in the area for a period of six years or longer. The majority of all four also occupy buildings which are of at least 26 years of age. Further and more detailed information on the characteristics of different industry types can be obtained by studying Table A1.

Figures A1 through A4 graphically illustrate the response of industries by their industrial breakdown to reasons for entering the Ironbound area. Referring to these figures, one immediately notices significant responses by all types of industry to questions dealing with building availability, labor availability, highway facilities, and the proximities to a consumer market and complementary industries. Deviations do exist, however, when looking at other reasons given importance by the different industries in the Ironbound region. Those industries which are engaged in wholesale and services, for example, responded more heavily to adequate rail facilities than did industries engaged in manufacturing and construction. Furthermore, while other types of industries attached little or no importance to the proximity of financial institutions, a large percentage of construction firms gave

this as a major reason for locating in the Ironbound area. To continue, while industries engaged in manufacturing and services have responded heavily to municipal services, the wholesale and construction firms attached only little importance to these services.

When discussing the problems these different industries are encountering with the Ironbound area, figures A5 through A8, which graphically show the responses of industries^{of} different types to these problems should be referred to. These figures clearly show that the greatest problem being encountered by all four industry types are rising taxes. The general cost of operation has become a problem, and received a significant response from all industrial categories except the one involved in construction. This construction group, which gave a 100% response to available labor as a reason for entering the area, also responded heavily to the unavailability of labor. The construction firms were the only ones, on a whole, to respond significantly to labor unavailability. Construction firms also indicated that insufficient room for expansion, poor rail facilities, insufficient room for loading and unloading, and deteriorating municipal services are major problems which they are experiencing.

Industries engaged in manufacturing and wholesaling, on the whole, indicated that only insufficient room for loading and unloading, besides increasing tax rates and operating costs, is of major concern while industries engaged in services indicated that, on the whole, they were experiencing no problems of major concern other than those dealing with taxes and

the cost of operation. It is interesting to note that none of the construction firms, although it is this class of industry which appears to be encountering the most problems with the Ironbound area, are considering moving out of this area. Thus it can be seen that a long list of grievances does not necessarily lead to industrial migration. This must be considered when making conclusions dealing with the causes for industrial move out from the Ironbound area.

Analysis by Employment Size

In further analyzing the results of the survey, the response of industries of different employment sizes were investigated separately. These industrial employment sizes were 1 to 10, 11 to 25, 26 to 50, 51 to 100, and over 100 people. Table B1 in Appendix B gives the response of industries of these employment sizes to selected questions dealing with industrial characteristics. From this table information concerning industry type, length of residence in the Ironbound area, and age of building can be obtained for each industrial employment group.

Figures B1 through B5 illustrate graphically the responses of industries to questions dealing with reasons for entering the Ironbound area. Looking at these graphic illustrations collectively, one notices a more than significant response to questions dealing with building and labor availability. The response to these two questions generally increase as the employment size of the industries responding increase. The maximum response to these reasons for entering the Ironbound area was received by industries which employ between 26 and

50 people. The response, however declined for industries which employ 51 to 100 people, and then again increased for firms which employ over 100 people. The response to public transportation and highway facilities as a reason for entering the Ironbound area also steadily rose until the employment size~~x~~ reached 51 to 100 people, at which point the response to these facilities declined. The only employment size from which municipal services received a significant response was the 51 to 100 employment size class.

Figures B6 through B10 show graphically the responses of industries by their employment size to possible problems which they are encountering with the Ironbourn area. When comparing these graphs to to each other one notices that as the employment size increases, the response to labor unavailability also increases. While only a 12% response was received by firms that employ between 1 and 10 people, those industries which employ over 100 people gave a 33% response to this~~p~~problem. Thus, it seems that for larger firms the unavailability of labor becomes more of a problem. Industries which are smaller, but still considered relatively large with respect to the Ironbound area, and employ 51 to 100 people, gave a 31% response to this problem of unavailable labor. The response to building inadequacy as a problem with the Ironbound location approaches the significant 33% level for only industries of the employment size 51 to 100. Furthermore, this~~s~~ same size group was also the only one from which unavailable room for expansion received a significant response, this response measuring 39%. It is interesting to note that it was this employment group

which gave the largest affirmative response to the question which deals with relocation. It is not surprising that according to table B1, 53.8% of the industries that employ 51 to 100 people occupy buildings which are over 50 years of age. Thus, again, there are strong indications that building inadequacy, and insufficient room for expansion are major reasons for industries considering relocation from the Ironbound area.

VII. Conclusions

In drawing conclusions from the survey, the following comments must first be made. The object of the survey was to discover the reasons for industrial migration from the Ironbound area. An analysis of the total response to the survey, however, resulted in only the discovery of problems encountered by industries in the area. By recording the frequency of response to certain key questions of the survey, the severity of these problems could be measured. However, there was no way to determine whether or not these problems led directly to industries moving out of the Ironbound area. Thus, in such an analysis it must be assumed that those problems which receive the largest overall response are the greatest causes of industrial migration. However, this assumption may not always hold true. To eliminate this problem, this project group separately analyzed the response of companies considering relocation to problems which they were experiencing in the Ironbound area. Thus, this analysis led to the discovery of problems and dissatisfactions which had led industries to consider relocation. It is felt by the members of this project group that this analysis yielded the most important results of the survey.

The findings of the separately conducted analysis of industries considering relocation are:

1. These industries originally entered the Ironbound area because of the availability of a building suitable for that industry's needs, adequate room for expansion, and the

availability of labor.

2. The major problems these industries are now encountering include insufficient room for expansion, the unavailability of labor, high tax rates, and rising operating costs.

It is of interest to note that the majority of the industries considering relocation are occupying old buildings which they own. In fact, 45% of the buildings these industries occupy are at least 50 years of age, while an additional 45% occupy buildings which are at least 26 years of age. It should also be noted that other problems encountered which received a response just short of the significant level were insufficient room for loading and unloading, which can be related to building inadequacy, and the fact that the cities reputation is making it difficult to attract labor which is directly related to labor unavailability.

Conclusions, therefore, which can be drawn from this survey are that the vast majority of industries which are considering leaving the Ironbound area, have been located in this area for a considerable length of time and occupy buildings which are extremely old. To continue, the major reasons for these industries originally entering the area included the availability of a suitable building, adequate room for future expansion, and the availability of a labor force. The main causes for industries leaving the Ironbound area are rising taxes, the unavailability of^a labor force, building inadequacy, and insufficient room for expansion.

Thus the reasons for industries leaving the Ironbound area are predominately the deterioration of those facilities for which they originally located in the area.

APPENDIX A: SURVEY ANALYSIS BY TYPE OF INDUSTRY

Table A1. Response to Selected Questions
by Industry Type

No. of People Employed	Industry Type			
	Constr.	Manufacture	Wholesale	Services
1-10	20.0	13.4	12.5	50.0
11-25	40.0	28.3	62.5	37.5
26-50	40.0	19.4	12.5	0.0
51-100	0.0	15.4	0.0	12.5
over 100	0.0	20.8	12.5	0.0
% of Blue Collar Workers Employed				
0-10%	20.0	7.4	12.5	37.5
11-25%	20.0	2.9	12.5	0.0
26-50%	20.0	11.9	25.0	12.5
51-75%	20.0	26.8	37.5	12.5
75-100%	20.0	45.5	12.5	37.5
Years Located in the Ironbound				
1-5yrs	0.0	4.4	12.5	0.0
6-25yrs	40.0	49.2	25.0	50.0
26-50yrs	40.0	20.8	37.5	37.5
over 50 yrs	20.0	22.3	25.0	12.5
Rent Building Occupied	20.0	23.8	50.0	25.0
Own Building Occupied	30.0	73.1	50.0	50.0

Age of Building	Constr.	Industry Type		
		Manuf.	Wholesale	Services
1-5 yrs	0.0	0.0	25.0	0.0
6-25 yrs	0.0	16.4	0.0	25.0
26-50 yrs	60.0	40.2	37.5	50.0
over 100 yrs	40.0	40.2	37.5	25.0
Type of Building Occupied				
Single Story	20.0	46.2	37.5	37.5
Two Story	80.0	19.4	37.5	50.0
More than Two Story	0.0	31.3	25.0	12.5
Considering Relocation				
Yes	0.0	23.9	12.5	12.5
No	100.0	73.1	62.5	62.5

Fig. A1

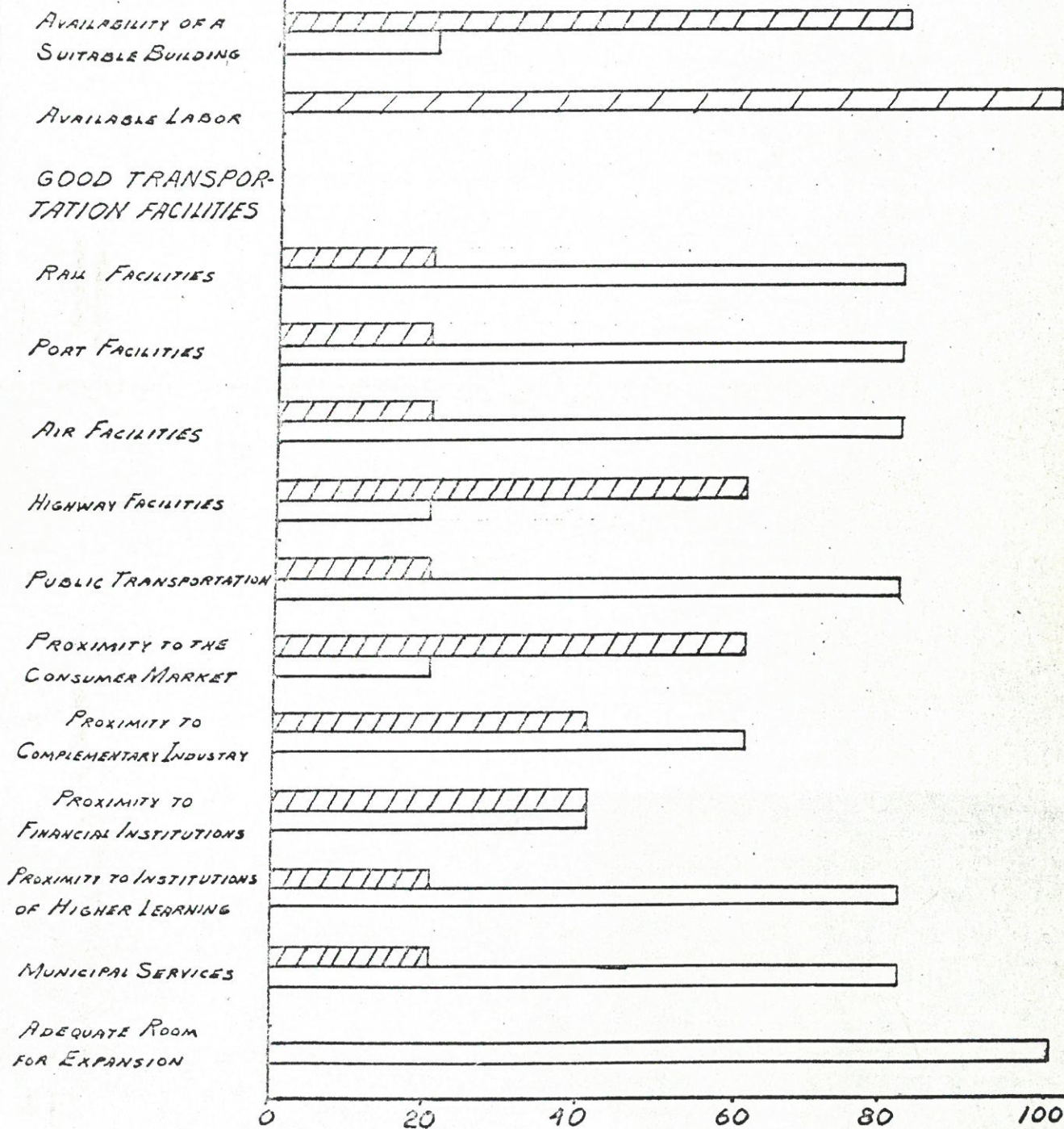
CONSTRUCTION COMPANIES' RESPONSES

KEY



OF MAJOR IMPORTANCE
MINOR REASON

REASONS FOR LOCATING IN THE "IRONBOUND" AREA





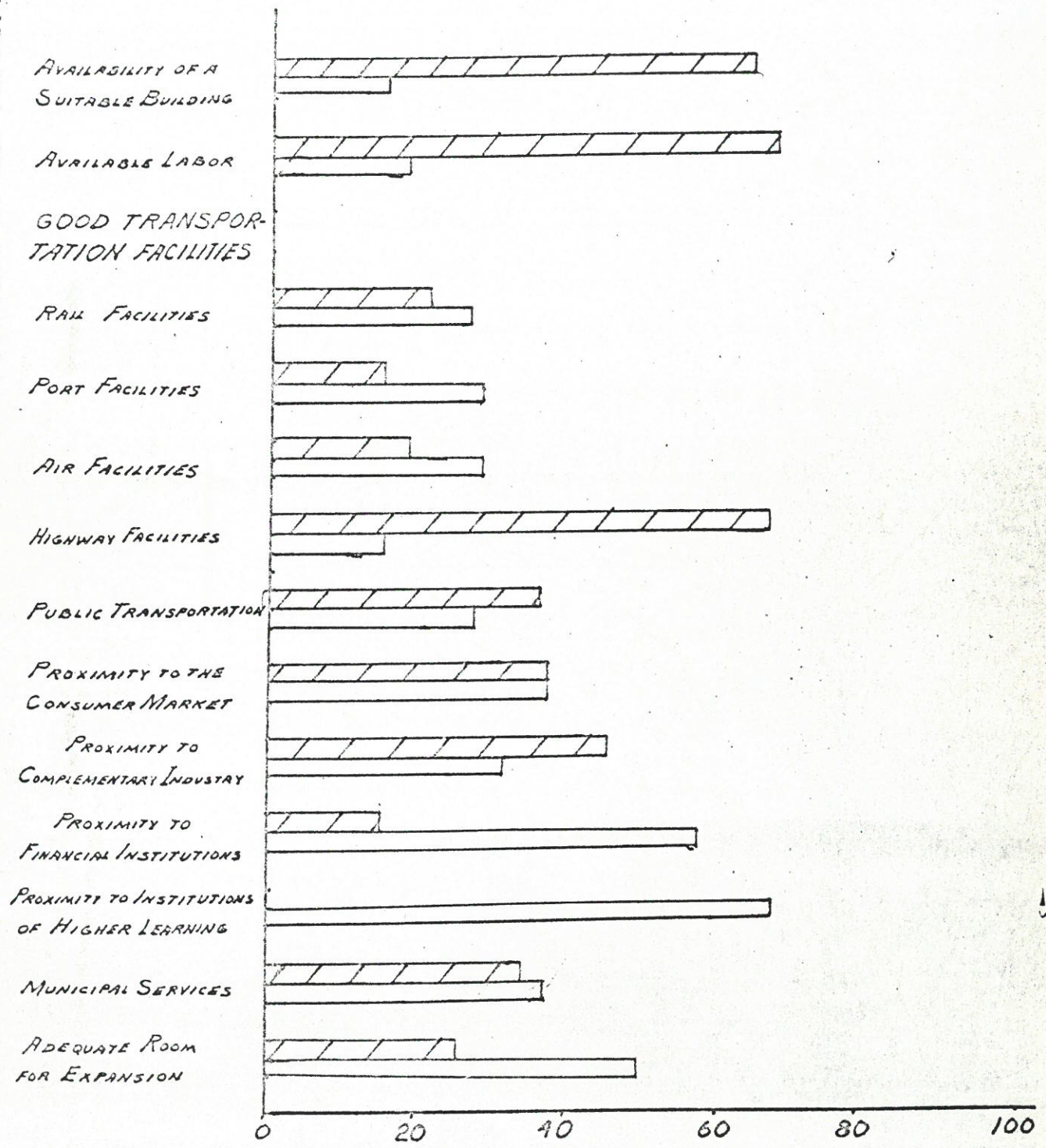
PERCENT OF TOTAL RESPONSE

FIG. A2 *MANUFACTURING RESPONSES*

REASONS FOR LOCATING IN THE "IRONBOUND" AREA

KEY

 OF MAJOR IMPORTANCE
 MINOR REASON



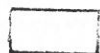
PERCENT OF TOTAL RESPONSE

COMPANIES' RESPONSES

KEY

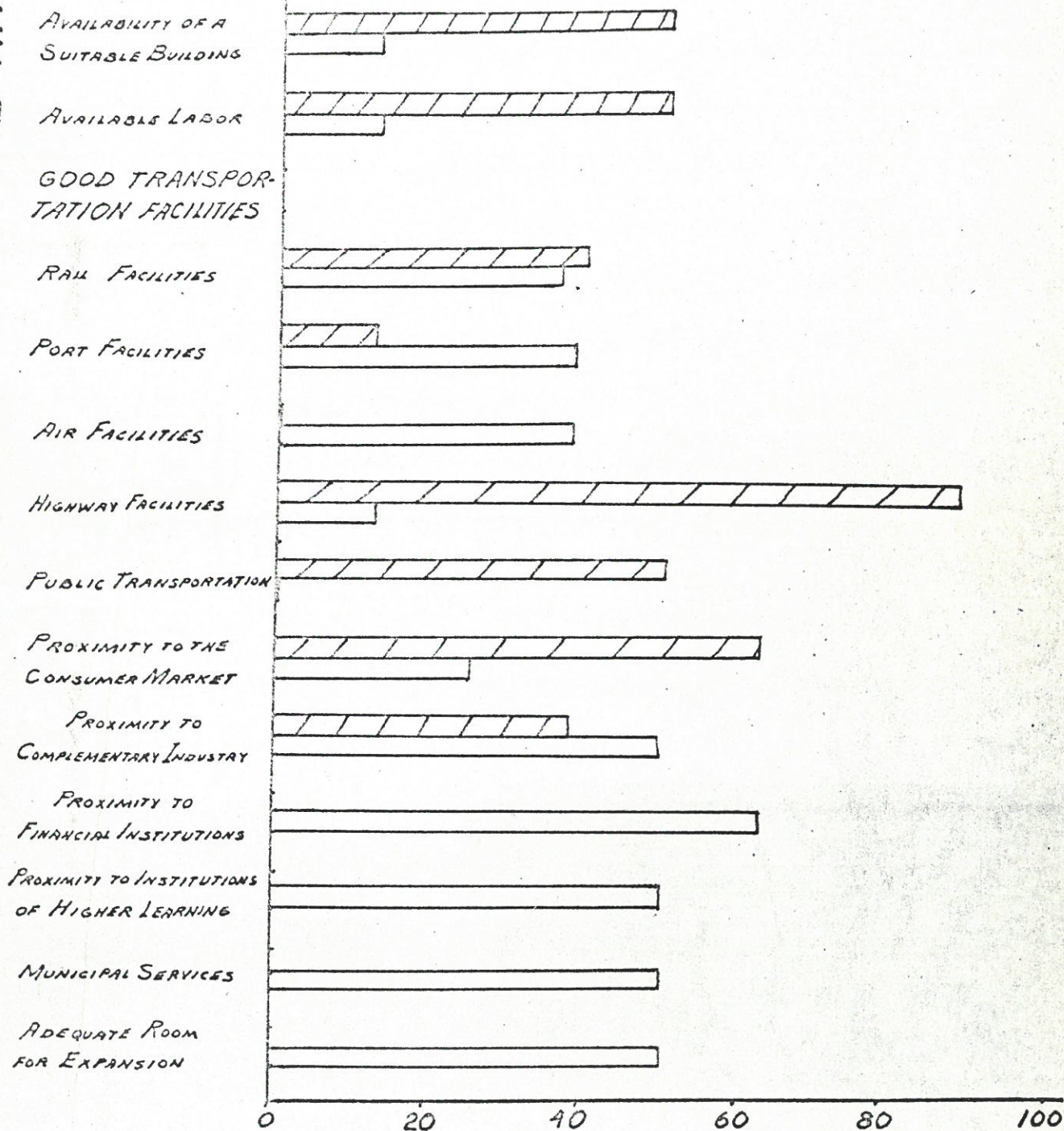


OF MAJOR IMPORTANCE



MINOR REASON

REASONS FOR LOCATING IN THE "IRONBOUND" AREA



PERCENT OF TOTAL RESPONSE

Fig. A4 ⁴³INDUSTRIAL SERVICES RESPONSES

REASONS FOR LOCATING IN THE "IRONBOUND" AREA

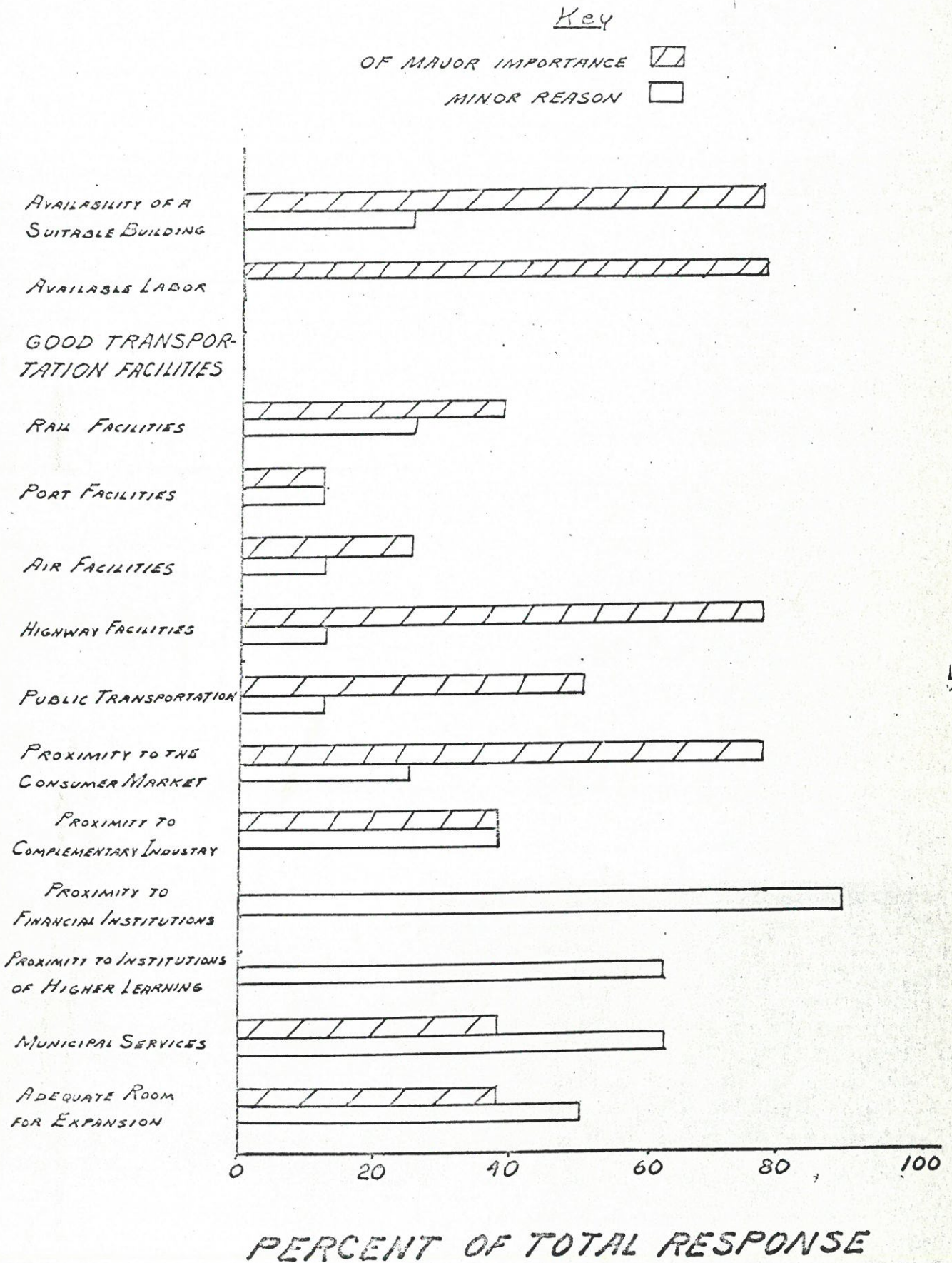
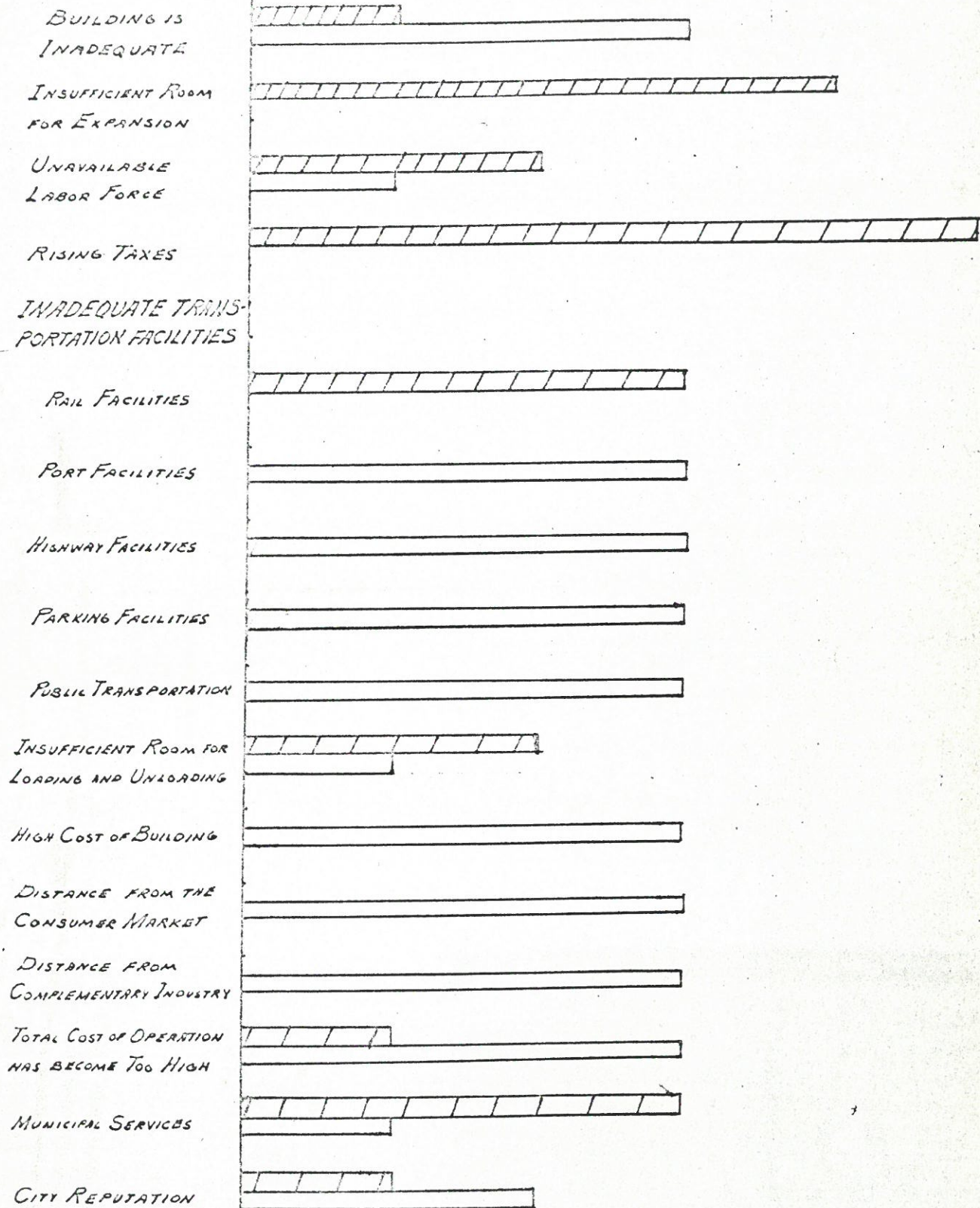


FIG. 15 CONSTRUCTION COMPANYS RESPONSES

44

PROBLEMS WITH THE "IRONBOND" LOCATION

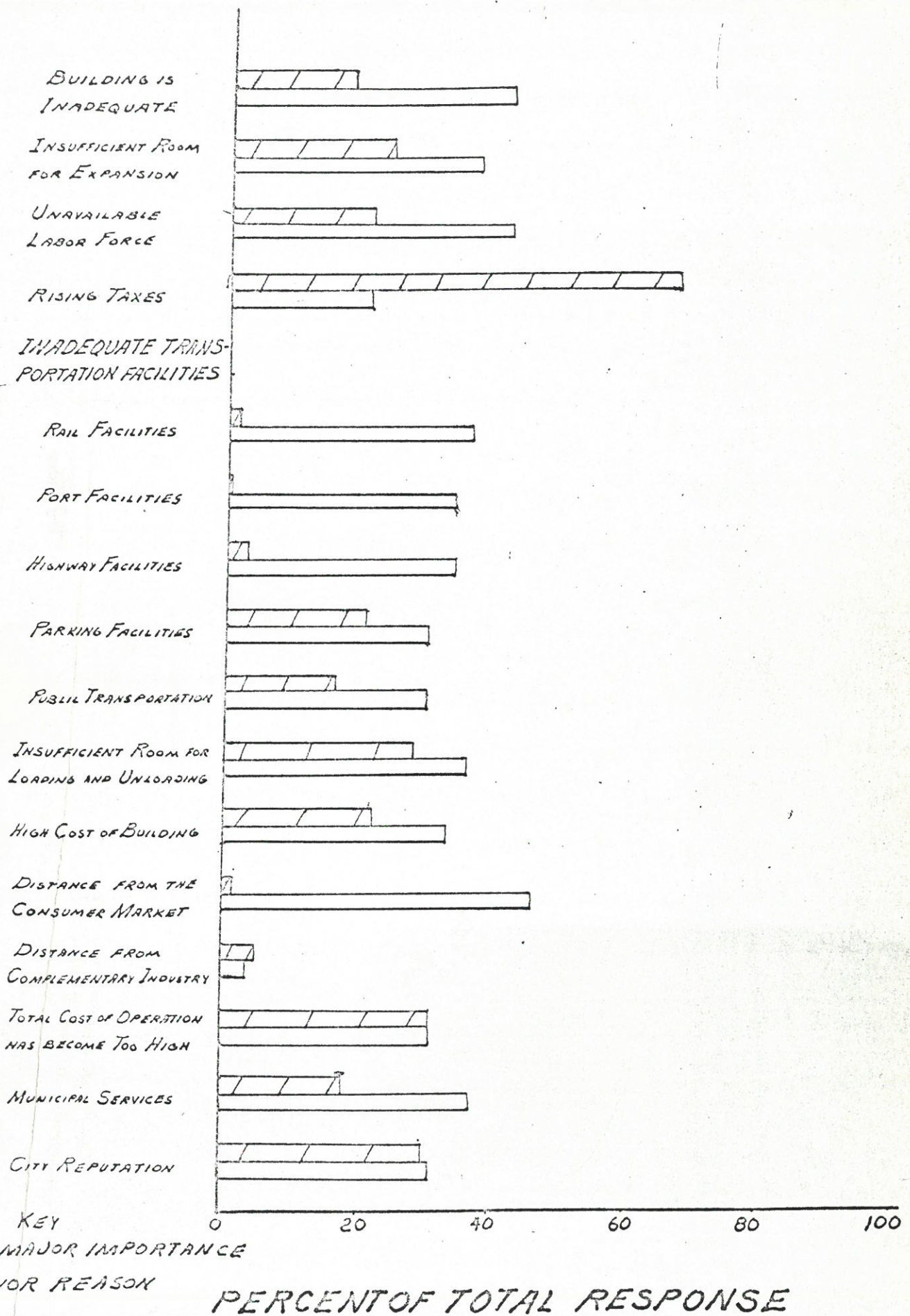


KEY

OF MAJOR IMPORTANCE
MINOR REASON

PERCENT OF TOTAL RESPONSE

PROBLEMS WITH THE "IRONEBOND" LOCATION



WHOLESALE COMPANIES' RESPONSES

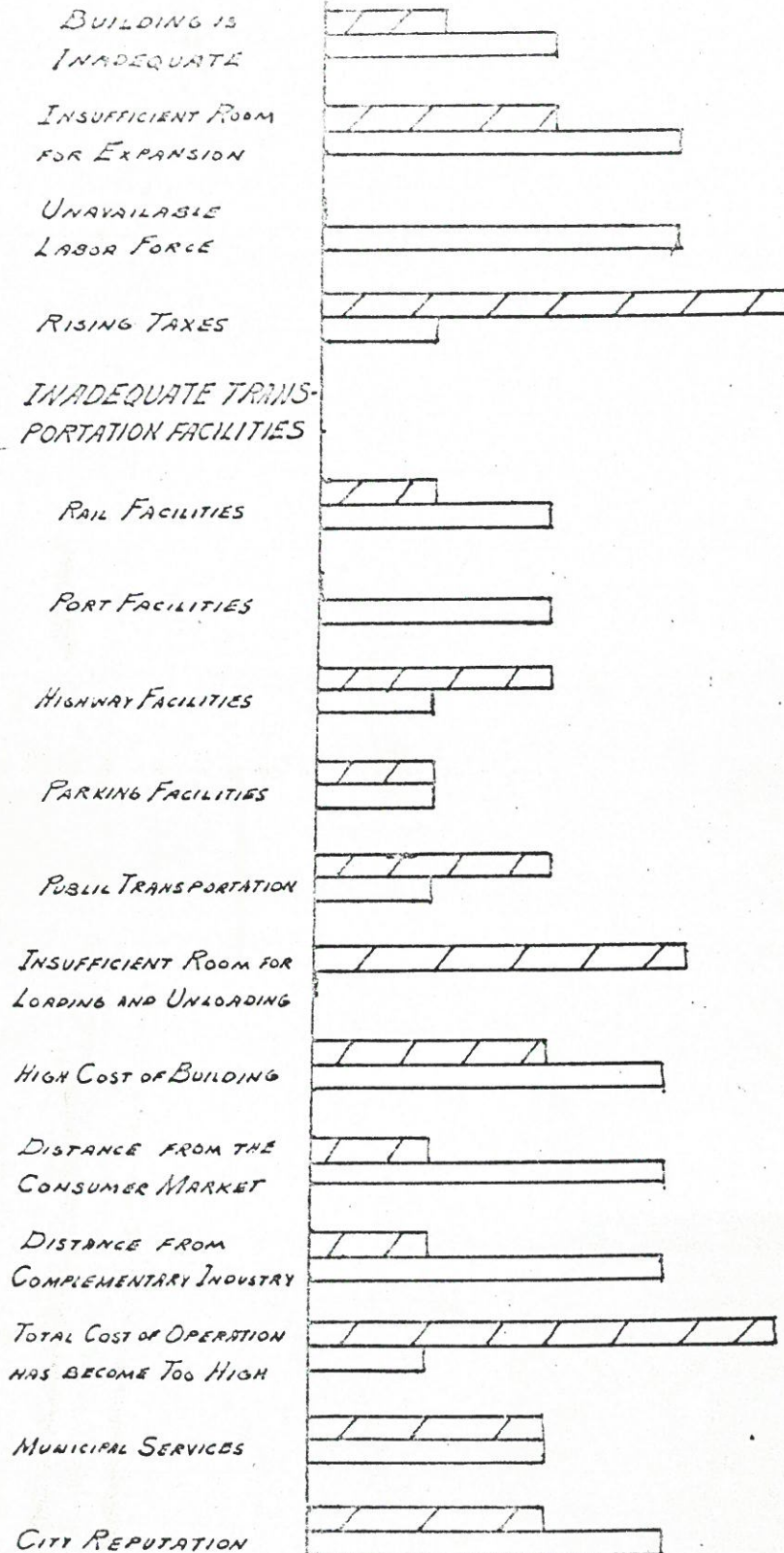
Key

46

OF MAJOR IMPORTANCE
MINOR REASON



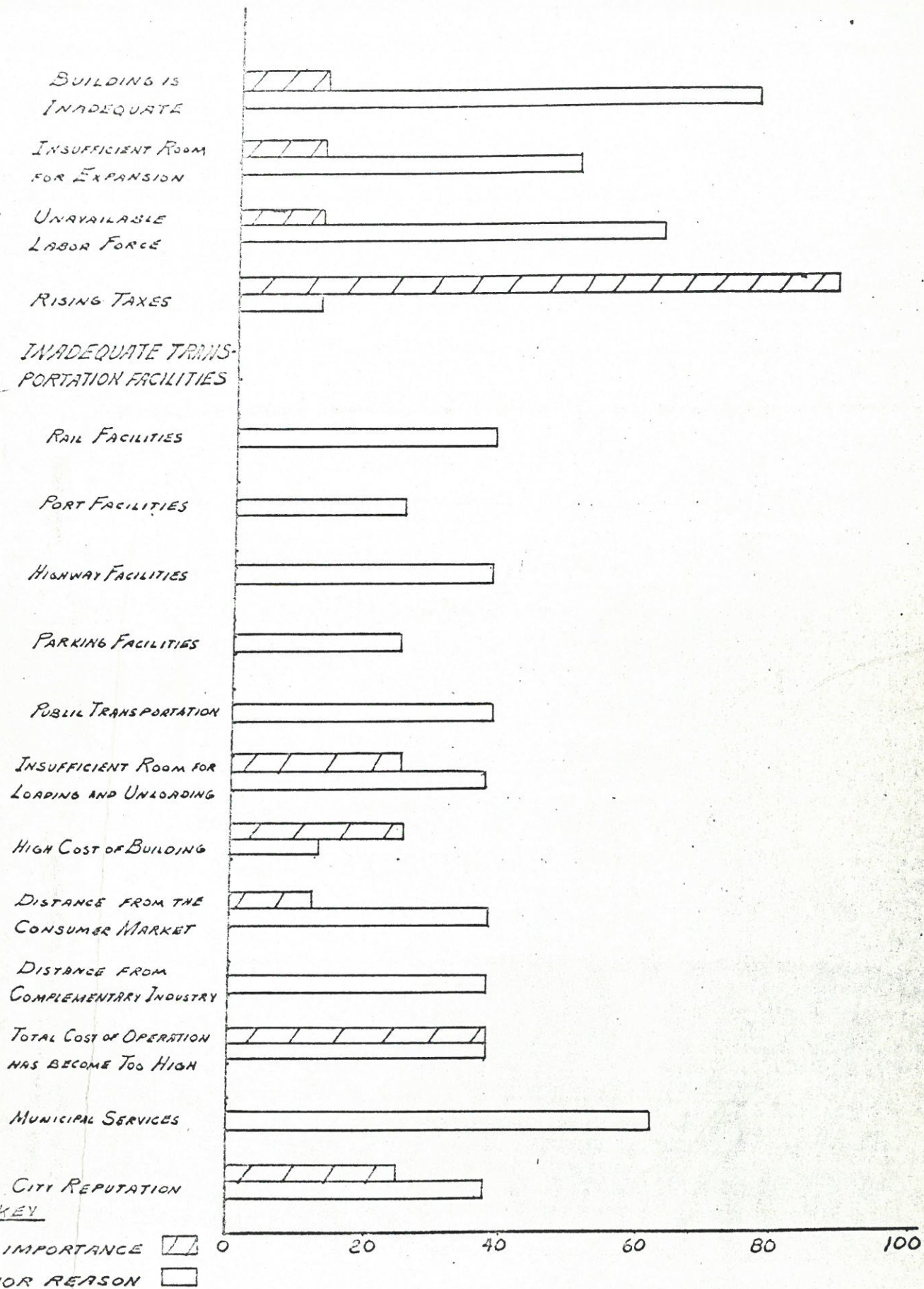
PROBLEMS WITH THE "IRONBOND" LOCATION



PERCENT OF TOTAL RESPONSE

46

PROBLEMS WITH THE "IRONBOND" LOCATION



PERCENT OF TOTAL RESPONSE

APPENDIX B: SURVEY ANALYSIS BY EMPLOYMENT SIZE

Table B1. %Response to Selected Questions
by Employment Size

Type of Industry	Employment Size				
	1-10	11-25	26-50	51-100	over 100
Construction	5.88%	6.66	11.8	0.00	0.0
Manufacturing	52.9 %	63.3	76.5	84.6	93.3
Wholesale	5.88%	16.7	5.9	0.0	6.7
Services	23.5 %	10.0	17.6	7.7	0.0
% of Blue Collar Workers Employed					
0-10%	35.3	16.7	5.9	0.0	6.7
11-25%	0.0	6.7	5.9	7.7	0.0
26-50%	23.5	10.0	23.5	7.7	6.7
51-75%	5.88	20.0	47.1	30.8	33.3
76-100%	35.3	46.7	17.6	46.2	46.6
Years Located in the Ironbound					
1-5 yrs.	0.0	6.7	0.0	15.4	0
6-25 yrs	64.7	36.7	52.9	30.8	53.3
26-50 yrs	23.5	43.3	17.6	15.4	13.4
over 50 yrs	11.8	13.3	23.5	38.4	33.3
Rent Building Occupied	41.2	30.0	17.6	30.8	6.70
Own Building Occupied	47.1	66.7	82.4	69.2	93.3

Age of Building	Employment Size				
	1-10	11-25	26-50	51-100	over 100
1-5 yrs.	0	6.7	0	0	0
6-25 yrs	23.5	6.7	11.8	30.8	20.0
26-50 yrs	47.1	50.0	61.5	15.4	40.0
over 50 yrs	29.4	36.7	35.3	53.8	40.0

Type of Building
Occupied

Single Story	47.1	50.0	47.1	38.5	26.7
Two Story	41.2	23.3	17.6	30.8	33.3
More than Two Story	11.7	26.7	35.3	23.1	40.0

Considering
Relocation

Yes	29.4	16.7	5.9	38.5	26.7
No	58.8	76.7	94.1	61.5	73.3

FIG. B1 *EMPLOYMENT SIZE 1-10*

REASONS FOR LOCATING IN THE "IRONBOUND" AREA

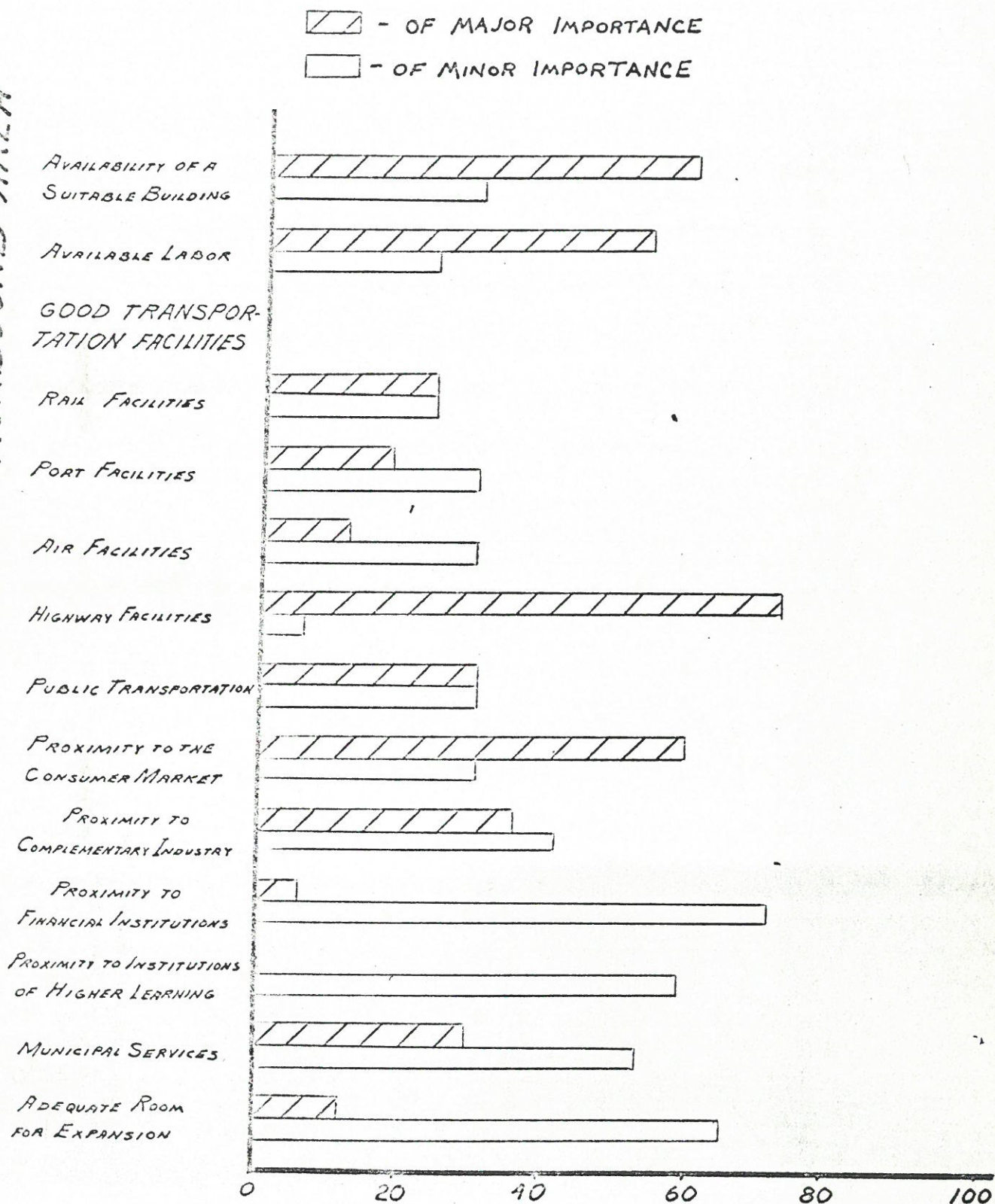
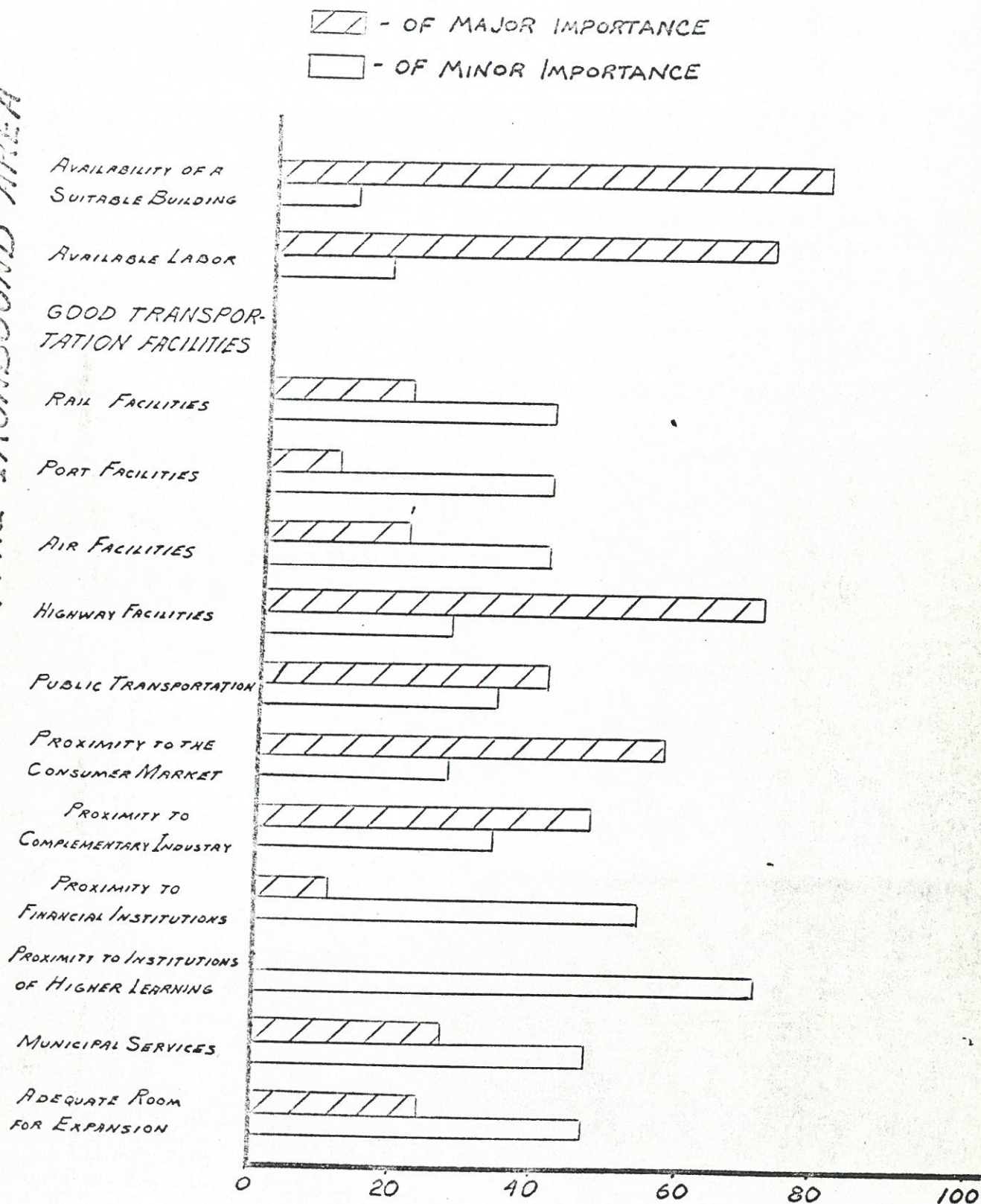


FIG. B2

EMPLOYMENT SIZE OF 11-25

REASONS FOR LOCATING IN THE "IRONBOUND" AREA



PERCENT OF TOTAL RESPONSE

Fig. B3 EMPLOYMENT SIZE OF 26-50

REASONS FOR LOCATING IN THE "IRONBOUND" AREA

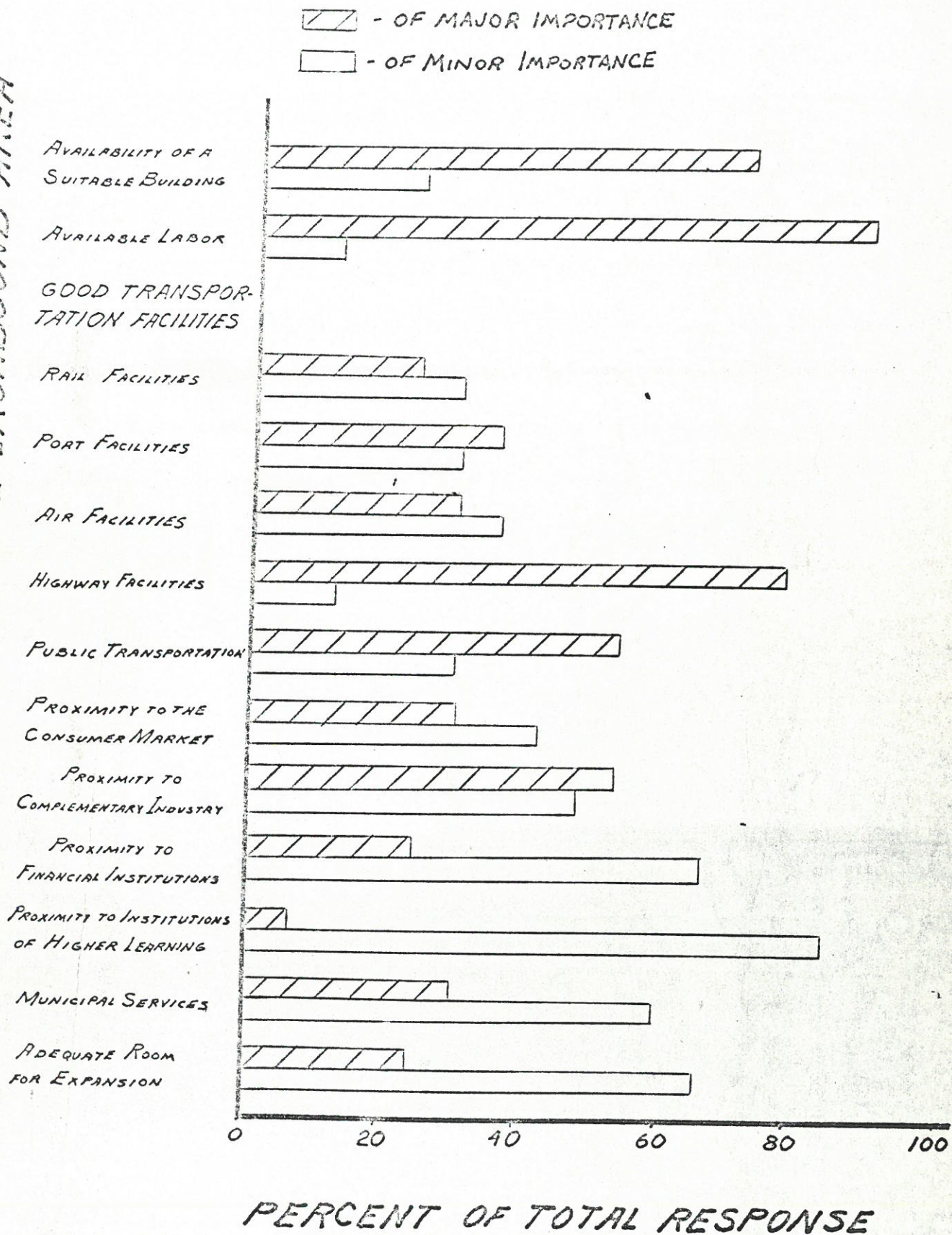
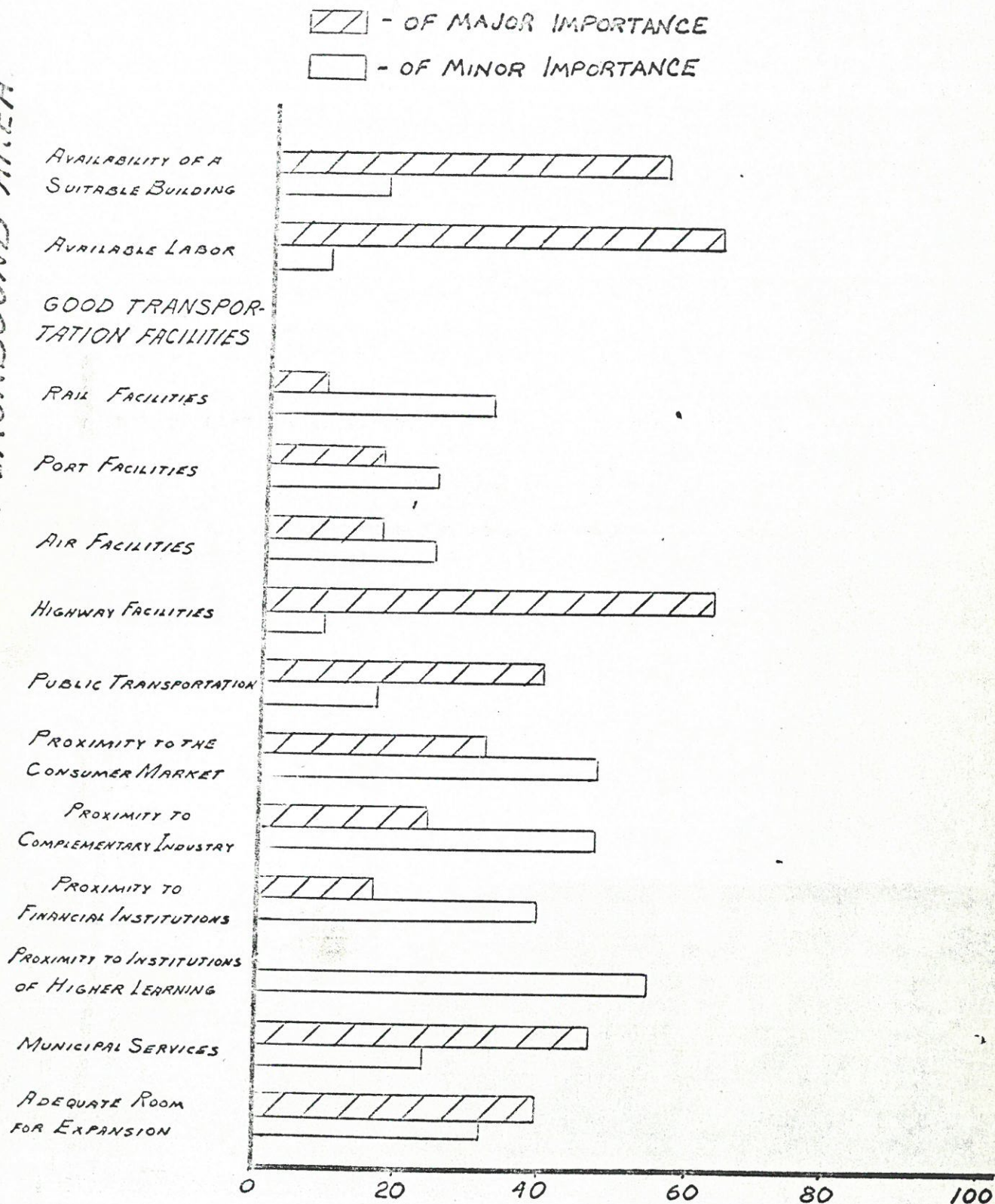


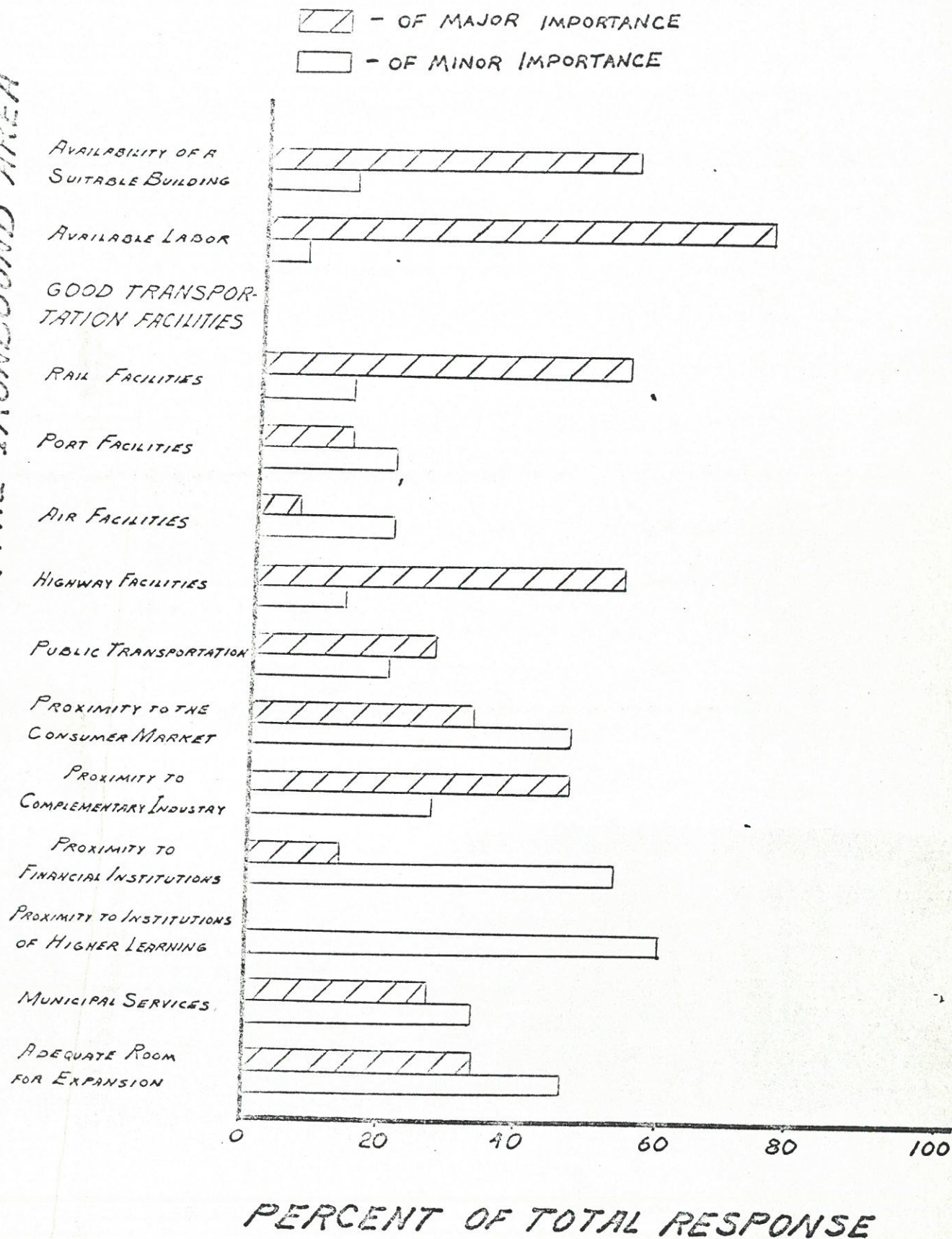
Fig. B4

EMPLOYMENT SIZE OF 51-100

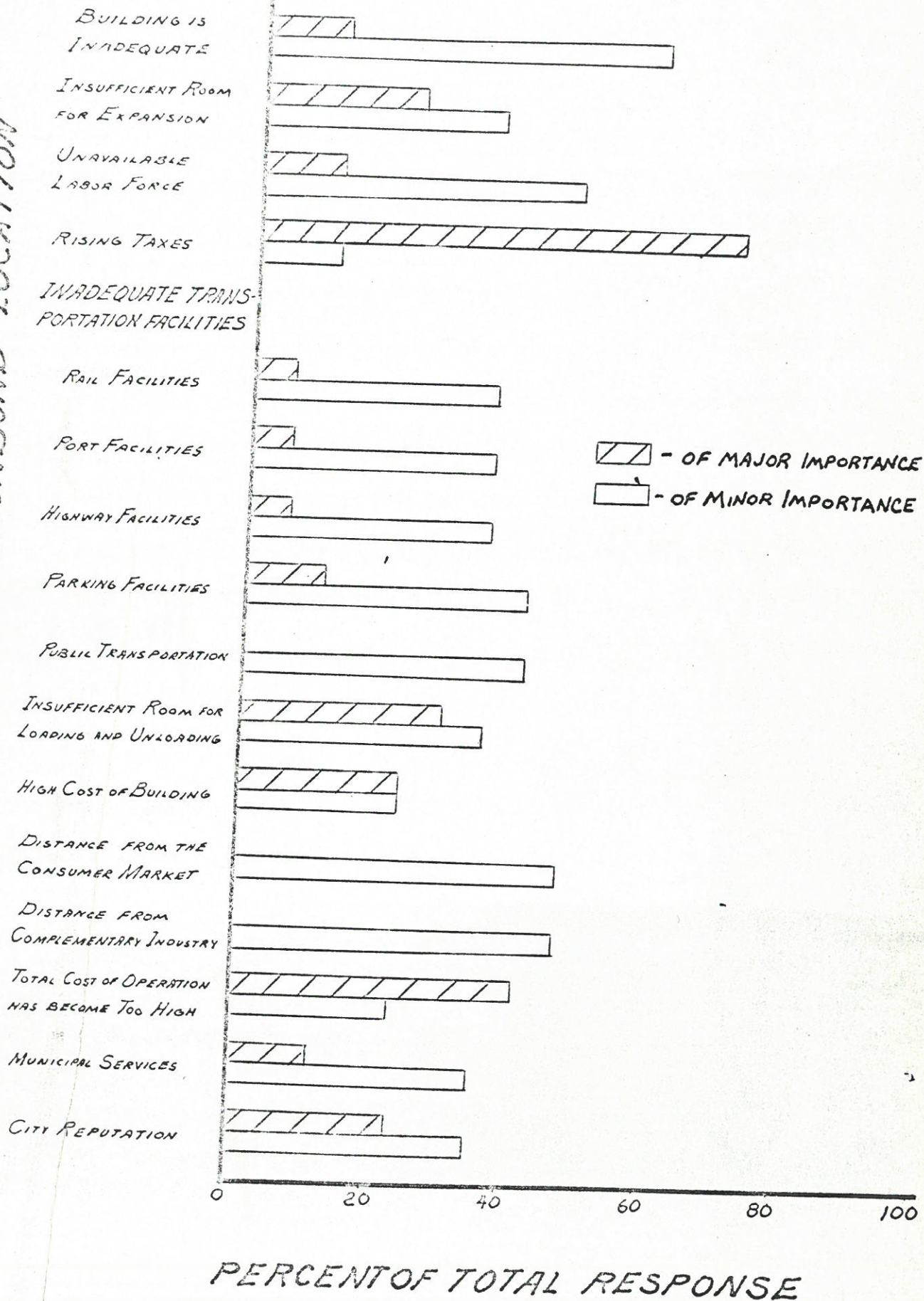
REASONS FOR LOCATING IN THE "IRONBOUND" AREA



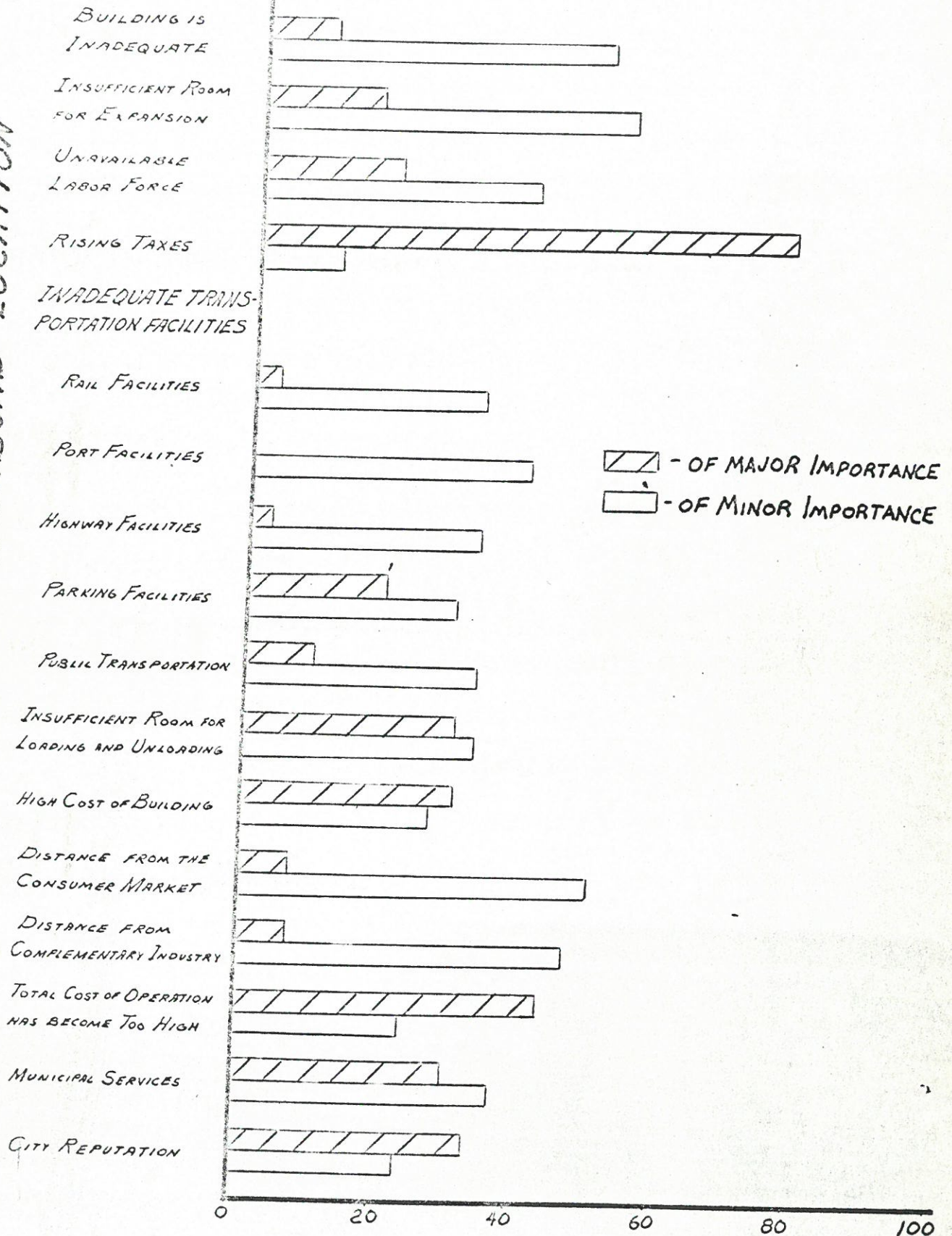
REASONS FOR LOCATING IN THE "IRONBOUND" AREA



PROBLEMS WITH THE "IRONBOND" LOCATION

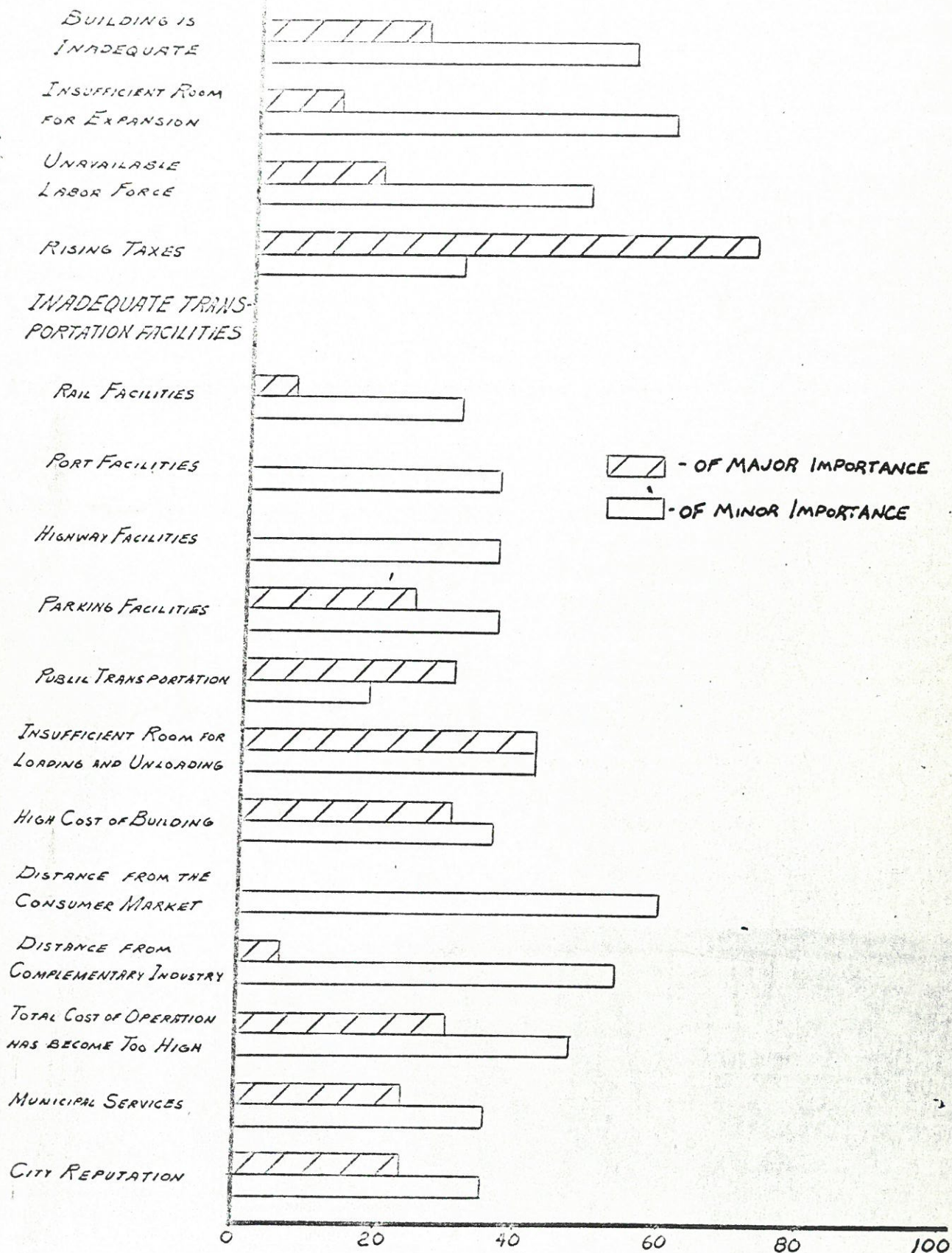


PROBLEMS WITH THE "IRONBOND" LOCATION



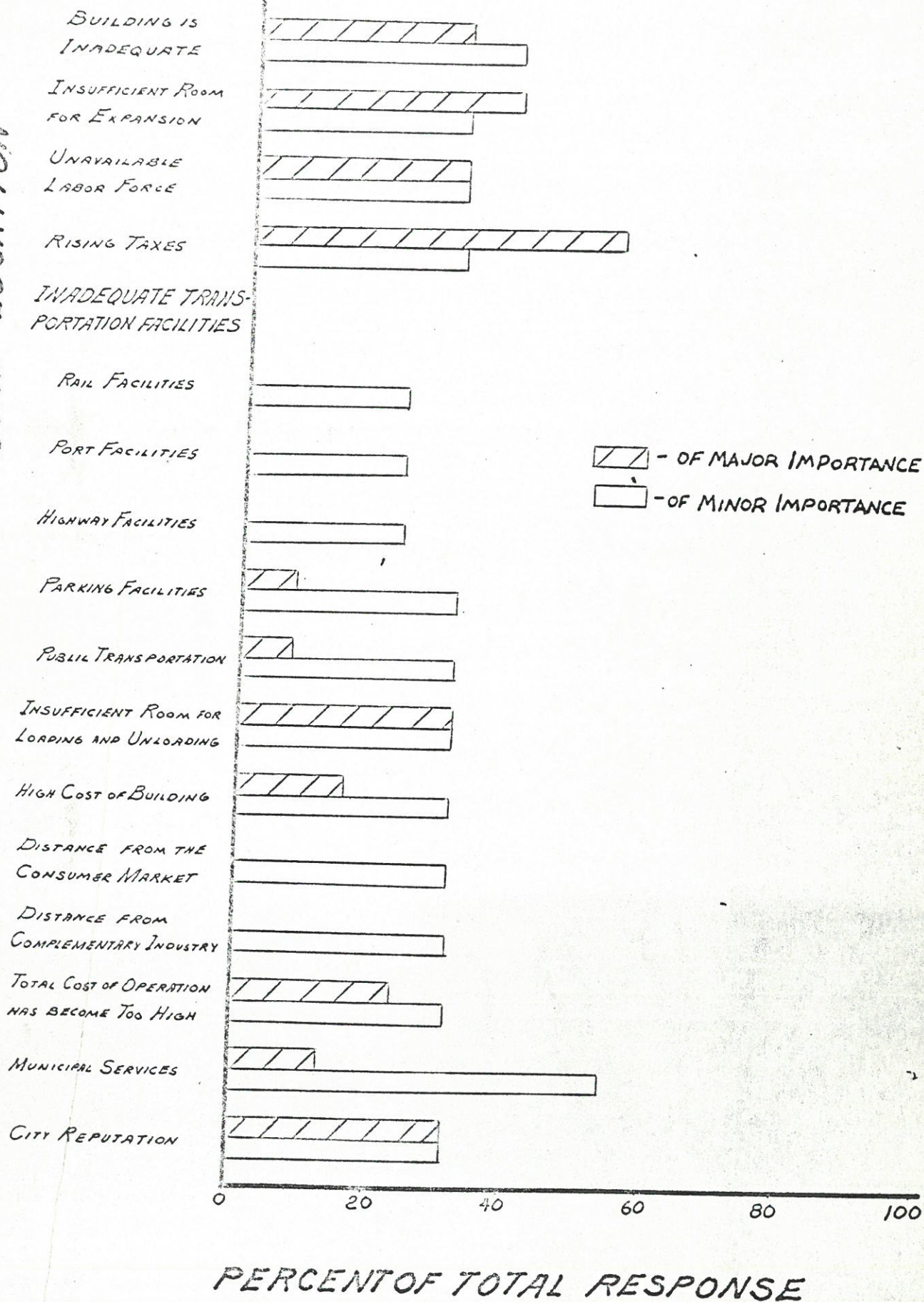
PERCENT OF TOTAL RESPONSE

PROBLEMS WITH THE "IRONBOND" LOCATION

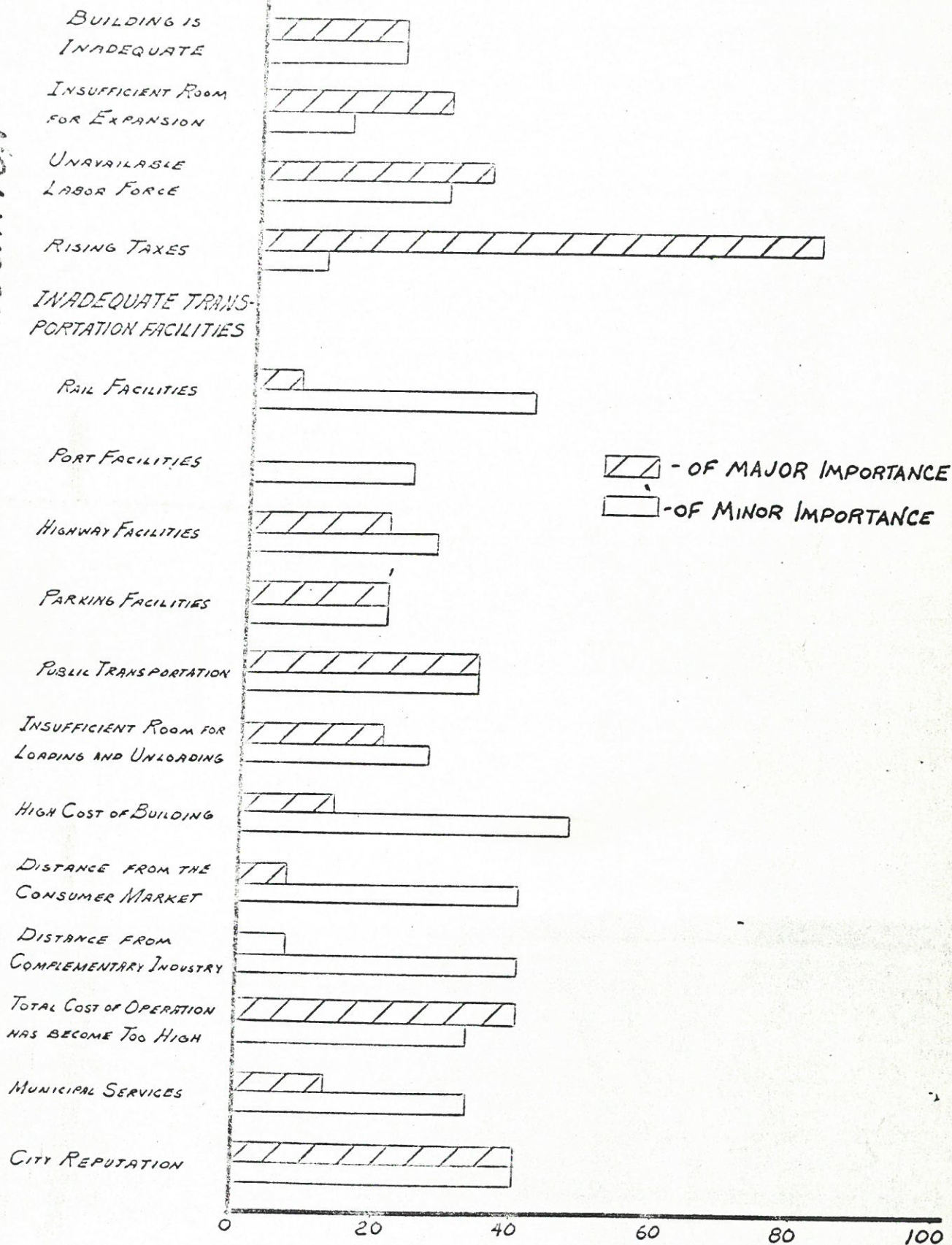


PERCENT OF TOTAL RESPONSE

PROBLEMS WITH THE "IRONBOND" LOCATION



PROBLEMS WITH THE "IRONBOND" LOCATION



PERCENT OF TOTAL RESPONSE

APPENDIX C: COMPUTER PROGRAM USED IN THE SURVEY ANALYSIS

\$BEGIN CIVIL,NOATR,NOXREF,SM=(2,72,1),TIME=85,PAGES=500

P L A G O VERSION 2 LEVEL 2

5/ 8/74

STMT BLK NEST

TEXT

```
0          STAT:  PROCEDURE OPTIONS(MAIN);
1          DECLARE
1          AMOUNT FIXED,
1          COLUMNS FIXED;
2          AMOUNT=1 ;
3          COLUMNS=39;

4          BEGIN;
5          1      1      DECLARE
5          1      1      CORT CHAR(1),
5          1      1      HOLD(COLUMNS) CHAR(1),
5          1      1      CARDS(AMOUNT,COLUMNS) CHAR(1),
5          1      1      ANS(COLUMNS,0:9) FIXED,
5          1      1      ROW FIXED,
5          1      1      SORT FIXED,
5          1      1      COL FIXED;
6          1      1      ON ENDFILE(SYSIN) GO TO START;
7          1      1      I=1;
8          1      1      IC=COLUMNS;
9          1      1      GETC:  GET EDIT (CARDS(I,*)) (COL(1),(80)(A(1)));
10         1      1      IF CARDS(I,1) ^= '*' THEN DO;
11         1      1          I=I+1;
12         1      1          IF I <= AMOUNT THEN GO TO GETC;
13         1      1          I=I+1;
14         1      1          END;
15         1      1      START:  I=I-1;
16         1      1          II=31;
17         1      1      LOOP:  SORT= ;
18         1      1          DO J=1 TO I;
19         1      1          DO J=1 TO I-1;
20         1      1              IF CARDS(J,II) > CARDS(J+1,II) THEN DO;
21         1      1                  HOLD(*)=CARDS(J,*);
22         1      1                  CARDS(J,*)=CARDS(J+1,*);
23         1      1                  CARDS(J+1,*)=HOLD(*);
24         1      1                  SORT=1;
25         1      1                  END;
26         1      1              END;
27         1      1          IF (SORT ^= ) & (I > 1) THEN GO TO LOOP;
28         1      1          ANS= ;
29         1      1          CORT=CARDS(1,II);
30         1      1          DO J=1 TO I;
31         1      1              IF CARDS(J,II) ^= CORT THEN DO;
32         1      1                  CALL PRINT(II,CORT,ANS,IC);
33         1      1                  CORT=CARDS(J,II);
34         1      1                  END;
35         1      1              DO COL=1 TO COLUMNS;
36         1      1                  ROW=CARDS(J,COL);
37         1      1                  ANS(COL,ROW)=ANS(COL,ROW)+1;
38         1      1                  END;
39         1      1          END;
40         1      1      END;
41         1      1
42         1      1
43         1      1
44         1      1      END;
```


5/ 8/74

STMT BLK NEST

TEXT

```

45 1 2 CALL PRINT(II,CORT,ANS,IC);
46 1 2 II=II+1;
47 1 2 IF II <= COLUMNS THEN GO TO LOOP;
49 1 2 END;

50 1 1 PRINT: PROCEDURE(II,CORT,ANS,IC);
51 2 2 DECLARE
51 2 2   ANS(*,*) FIXED,
51 2 2   CORT CHAR(1);
52 2 2 PUT EDIT ('SORTED BY COLUMN: ',II)(COL(2),A(18),F(2,0));
53 2 2 PUT EDIT ('WITH A SUBSORT USING: ',CORT)(SKIP,COL(14),
53 2 2   A(22),A(2));
54 2 2 PUT SKIP;
55 2 2 PUT EDIT ('# ', '#1', '#2', '#3', '#4', '#5', '#6', '#7', '#8', '#9')
55 2 2   (SKIP(2),COL(16),(10)(A(2),X(8)));
56 2 2 DO JI=1 TO IC;
57 2 3   PUT EDIT ('QUES ',JI,ANS(JI,*))(SKIP,COL(3),A(5),F(2,
57 2 3   COL(14),(10)(F(6, ),X(4)));
58 2 3   END;
59 2 2 ANS= ;
60 2 2 PUT PAGE;
61 2 2 END PRINT;
62 1 1 END STAT;

```

ANSLATION TIME= 3.02 SECONDS

— APPENDIX D: SURVEY MAILING LIST

SURVEY MAILING LIST

*A. C. Transformer Company 89 Madison Street	Alton Mfg. Corp. 84 Monroe Street
Abbey Fiber Mills, Inc. 338 Wilson Ave.	American Sportswear Co. 113 Monroe Street
Abca Pallet & Box Co., Inc. Foot of Pacific Street	*American Waste & Textile Co. 73 Vesey Street
*Ablon Finishes, Inc. 84 Waydell Street	*Anodizing Corp. 39 Avenue L
*Ace Bag & Burlap Co. 33-37 New York Ave.	*Apex Color Works, Inc. 64 Chapel Street
Acme Refining Corp. 12 Lister Ave.	*Arkansas Co., Inc. 185 Foundry Street
*Adams Sheet Metal Co. Ft. of Pacific St. Bldg. 27	Arlen Chemical Corp. 198 Pacific Street
Adco Chemical Co., Inc. 150 Rome Street	Arol Chemical Products Co. 649 Ferry Street
Air Condition Associates, Inc. 105 Monroe Street	*John L. Armitage & Company 245 Thomas Street
Air Products & Chemicals, Inc. 825 Wilson Ave.	Armour Paper Box Corp. 223 Raymond Blvd.
All Plating & Die Casting Corp. 36 Goble Street	Ashland Chemical Co. 221 Foundry Street
All State Paper Box Co., Inc. 223 Raymond Blvd. P.O. Box 29	*Atlas Valve Company 280 South Street
All State Publishing Co. 62 Ann Street	*Atlas Refinery, Inc. 142 Lockwood Street
*Allcast Non-Ferrous Foundry 483 Raymond Blvd.	*Automatic Electroplating Corp. 347 Ferry Street
*Alliance Chemical Inc. 33 Avenue P	Avion Pattern Corp. 146 Lafayette Street
Alpha Chemical & Plastics Corp. 1 Jabez Street	Aztec Leather Corp. 195 McWhorter Street

* indicates company has been in the Ironbound for 10 years or more.

*Banner Chemical Corp.
9-11 Calumet Street

Norman Barger Co., Inc.
350 Lafayette Street

*Barrett & Co.
49 Vesey Street

*Barth Smelting & Refining Corp.
99 Chapel Street

*Bayonne Barrel & Drum Co.
U.S. Hwy. 1 and Raymond Blvd.

Beacon Cabinet Mfg. Co., Inc.
124 Adams Street

*Wm. H. Becker, Inc.
97-99 Ann Street

*Behringer Metal Works, Inc.
108-122 Jabez Street

Bel-Air Machine Products Co.
215 N.J.R.R. Ave.

*Bennett Heat Treating Co., Inc.
690 Ferry Street

Bernan Food Corp.
30 Jabez Street

*Black Oxide Processing Corp.
85 Gotthart Street

*Bonney-Vohslage Tool Co.
61 N.J.R.R. Ave.

Book Covers, Inc.
17 Blanchard Street

Robert Bossert & Co., Inc.
10 Lister Ave.

Bow Solder Products Co.
25 Amsterdam Ave.

*Brin Mfg. Co., Inc.
109 Albert Ave.

*Bristold-Donald Co., Inc.
50 Roanoke Ave.

Bukowiec Meat Products, Inc.
9-B Euclid Ave.

*Calumet Electroplating & Polishing
24 Calumet Street

Canrad Precision Industries, Inc.
100 Chestnut Street

*Castrol Oils, Inc.
254-266 Doremus Ave.

Celanese Chemical Co.
354 Doremus Ave.

Celanese Coating Co.
Delancy & Rutherford Streets

Cellomer Corp.
46 Albert Ave.

*Central Steel Drum Co.
704 Doremus Ave.

Century Snack, Inc.
433 Raymond Blvd.

The Chapal Donner Corp.
29 Clover Street

*Chem-Fleur, Inc.
200 Pulaski Street

Chestnut Woodworking & Lumber Co.
376 Chestnut Street

Circle Steel Rule & Die Co.
258 South Street

*Clarion Chemical Corp.
17 George Street

Clinton Metal Fabricating Co.
9-15 Malvern Street

*Comet Chemical Co., Inc.
410 Adams Street

*Commercial Solvents Corp.
196-202 Blanchard Street

*Continental Electric Co., Inc.
323-327 Ferry Street

- | | |
|---|---|
| Cortley Creations
105 Chestnut Street | Electrified Water Company
17-19 Union Street |
| Country Workshop, Inc.
95 Rome Street | Electro Plastics, Inc.
46 Oliver Street |
| *Crown Monarch, Inc.
44 St. Francis Street | *John H. Elliot Leather Co.
356-364 Adams Street |
| D. & M. Provision Co., Inc.
146-154 Christie Street | Emco Steel, Inc.
357 Wilson Ave. |
| *Daytona Finishing Corp.
59 Wall Street | *Empire Machine Products, Inc.
55-59 N.J.R.R. Ave. |
| Deborah Sales & Mfg. Co.
32 Vesey Street | Emsig Mfg. Corp.
61 N.J.R.R. Ave. |
| *Delisa Pallet Corp.
91 Blanchard Street | *Encapsulations, Inc.
288 Chestnut Street |
| *Delmar Metal Finishing Co.
153 Thomas Street | *Engelhard Industries
429 Delancy Street |
| Diversified Packaging Corp.
222 Thomas Street | *Essex Iron Works, Inc.
36 Calumet Street |
| *Donald Steel Treating Serv.
147-149 Thomas Street | *Engelhard Minerals & Chemicals Corp.
497 Delancy Street |
| Dri-Print Foils, Inc.
80 Wheeler Point Road | *Engravo Print Co.
177 Adams Street |
| *Duane Specialties, LTD.
2 Johnson Street | Enright Refining Co.
65 Euclid Ave. |
| *Duggans Distillers Products
11 Paris Street | Essex Chemical Corp.
330 Doremus Ave. |
| *Duralac Chemical Corp.
84 Lister Ave. | Essex Metal Alloy Co., Inc.
423 Adams Street |
| *Dynamic Die Cutting & Finishing Corp.
104 South Street | Eureka Products Co., Inc.
135 Jackson Street |
| Eastern Colortype Corp.
70 Blanchard Street | *Eureka Spring Co., Inc.
9-15 Manufacturers Place |
| Elan Chemical Co.
268 Doremus Ave. | European Parts Exchange of N.J., Inc.
300 Wilson Ave. |
| Electric Heat Control Appartus Co., Inc.
247 N.J.R.R. Ave. | Express Container Corp.
105 Avenue L |

- *American Metal Box Co.
25 Lexington Street
- *American Oil & Supply Co.
238 Wilson Ave.
- *American Smelting & Refining Co.
150 St. Charles Street
- *Fairmount Chemical Co., Inc.
117 Blanchard Street
- *Farmers Feed Co.
468 Raymond Blvd.
- Fashion Sport Coat
113 Monroe Street
- *Federal Bronze Products, Inc.
9 Backus Street
- Fenwick Mfg. Co.
75 Somme Street
- *Fine Pigments, Inc.
180 Blanchard Street
- *The Fisher Silversmiths, Inc.
217 Chestnut Street
- *Fiske Bros. Refining Co.
129 Lockwood Street
- Flakice Corp.
556 Ferry Street
- *Flexcraft Industries
527 Ave. P
- *Flockhart Foundry Co.
79 Polk Street
- *Four Star Candy Co., Inc.
96 Main Street
- *H. B. Franklin Co., Inc.
333 South Street
- *Fyr-Fyter Co.
U.S. Highway 1
- G & G Meat Co.
45 Malvern Street
- Gamon-Calmet Industries, Inc.
296 South Street
- Gem L. P. Records, Inc.
111 N.J.R.R. Ave.
- *General Aluminum Window Co., Inc.
23 New York Ave.
- *General Color Co.
24 Ave. B
- General Mold Casting Corp.
18 St. Francis Street
- Gold Cooperage, Inc.
401 South Street
- Goldsmith Leather Co., Inc.
50 Paris Street
- M. Goodman Plastics Mfg., Inc.
109 Ave. L
- Graver Water Conditioning Co.
72 Lockwood Street
- Grignard Chemicals Co., Inc.
185 Foundry Street
- *A. Gross Co.
652 Doremus Ave.
- *Guardian Fence Co.
230 Wright Street
- Guth & Palma, Inc.
105 Chestnut Street
- Hamilton Metal Products, Inc.
120 Pulaski Street
- *Handy Metal Store Fixtures, Inc.
14 Johnson Street
- *Geo. A. Hardy Book Craft
25 Prospect Street
- Haring Equipment Corp.
91 N.J.R.R. Ave.
- *S. Haydu & Sons, Inc.
107 Main Street

- *Hebb Spring Co.
244 South Street
- *Hemminger Co.
53 Rome Street
- Homecraft Mfg. Co.
42 St. Francis Street
- *Hommer Mfg. Co.
25-49 McWhorter Street
- *Hudsar, Inc.
373 South Street
- Hudson Tool & Die Co., Inc.
18 Malvern Street
- *Hurley Forge, Inc.
70 Manufacturers Place
- *Industrial Hard Chromium Co.
7 Rome Street
- Industrial Office Supply Co.
426 U.S. Hgw. 1
- *Industrial Petrochemicals Co.
128 Doremus Ave.
- *Industrial Process Engineers
8 Lister Ave.
- *Industrial Welding Co.
655 Ferry Street
- Inmont Corp.
244 McWhorter Street
- International Screw Machine
Corp.
16 Delancy Street
- International Testing
Laboratories Inc.
578-584 Market Street
- Ironbound Supply Co., Inc.
145 Jackson Street
- *Jersey Machine Mfg. Co.
8 Lister Ave.
- Jersey Wood & Medal Specialities
Company
8 Ave. B
- *Johnson Forging Works
294-306 Thomas Street
- K-Gor Mfg. Co., Inc.
34 Vesey Street
- Kasen Industries
88 St. Francis Street
- Kent Steel Corp.
Building 304
- *Kester Solder Co.
88 Ferguson Street
- Kohler Delicatessen Meats, Inc.
57 Napoleon Street
- *Kolton Electric Mfg. Co.
135 N.J.R.R. Ave.
- *Konstan Plastics Co.
33 St. Francis Street
- G. Kruse & Co.
60 McWhorter Street
- L. B. Metal Treating
108 Johnson Street
- *Lacquer Specialities, Inc.
249 Avenue P
- Laminating Corp. of America
48 Bruen Street
- *Landew & Blume
190 Clifford Street
- E. Landsberg Inc.
66 Stockton Street
- *Lecourtney Co.
Ferry & Main Street
- Lewmar Paper Co.
370 Adams Street
- Lilly Plastic Mfg. Co., Inc.
39 New York Ave.
- *Lincoln Farm Products
305 Doremus Avenue

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| Lincoln Marble Works
161-163 Thomas Street | *Metro Hydraulic Jack Co. of N.J.
141 N.J.R.R. Ave. |
| Linerboard Corp. of America
262-269 Wilson Ave. | Minnesota Mining & Mfg. Co.
500 Doremus Ave. |
| Lowenstein Metals, Inc.
225 Clifford Street | Modutech Housing Ind. Corp.
357 Wilson Ave. |
| Luminall Paints, Inc.
411 Wilson Ave. | Moldcast Mfg. Co.
164 Delancy Street |
| M & S Knitwear
620 Market Street | *Moldcast Products, Inc.
Foot of Pacific Street |
| *Machinecraft Corp.
800 Wilson Ave. | Moldite Electronics
250 South Street |
| *Chas. E. Maier, Inc.
123 Van Buren Street | Monroe Mfg. Co.
135 Monroe Street |
| *Malcolm Foundry Co.
67 Polk Street | Monroe Sign Co.
25 Lexington Street |
| *Peter F. Mallon, Inc.
528 Ferry Street | Montrose Chemical Div.
100 Lister Ave. |
| *Manhattan Tool Mfg. Co.
38 Van Buren Street | Benjamin Moore & Co.
134 Lister Ave. |
| Mannkraft Corp.
1000 U.S. Hwy. 1 | *Mother's Food Products
50 Wheeler Point Road |
| *Mastermix Mfg. Chemists
348 Van Buren Street | Moyer Plating, Inc.
175 Christie Street |
| *Otto B. May, Inc.
52 Amsterdam Street | Multi-State Industries, Inc.
205 Thomas Street |
| *McCabe Boiler Works, Inc.
488 Market Street | Mutual Brief Case Co., Inc.
133 Kossuth Street |
| Frank C. McCann Stone Co.
100 Roanoke Ave. | *National Moldite Co., Inc.
250 South Street |
| *Mechanical Art Works
96 Monroe Street | *H. M. Nelson Co.
248 Thomas Street |
| *Meren Industries Corp.
179 Murray Street | Netti Dress Corp.
101-111 N.J.R.R. Ave. |
| *Metal Parts Processing Co.
165 Delancy Street | *New Jersey Del Pak Corp.
149 Wilson Ave. |

- *Newark Boxboard Co.
17 Blanchard Street
- *Newark Envelope Co.
100 Madison Street
- *Newark Industrial Spraying Inc.
12-20 Amsterdam Ave.
- *Newark Screw Machine Prod., Inc.
76-78 Garden Street
- *Newark Sinker Co., Inc.
12-14 Napoleon Street
- *Newark Special Tool Co.
97 St. Francis Street
- Newark Vinyl Textile Co., Inc.
1 Vesey Street
- *Fritz Noeller
87 Pennington Street
- Norman Process of N.J., Inc.
170-174 Malvern Street
- Norpak Corp.
70 Blanchard Street
- Fire & Safety Equipment Div.
U.S. Hwy 1
- *Northern Feather, Inc.
39 Backus Street
- *Oak Point Dairies of N.J.
120-128 Rome Street
- *Ocean Leather Corp.
42 Garden Street
- *Omega Alloy Fitting Co.
99-109 Gotthart Street
- *Ontell Brush Co.
77 St. Francis Street
- *Onyx Oils & Resins, Inc.
193 Christie Street
- *Ortex Products, Inc.
560 Ferry Street
- Otto's Truck Body Works Corp.
26-32 Ave. L
- Otto Tool Co.
26 Ave. C
- *Owens-Illinois, Inc.
354 Thomas Street
- Packaging Products & Design Corp.
574 Ferry Street
- *Parco Co.
84 Johnson Street
- Patio Products, Inc.
164-168 Pennington Street
- Pedalino Dress Corp.
66 Olive Street
- Perdeco Display, Inc.
62-66 McWhorter Street
- Perfect Mfg. Corp.
56 Oliver Street
- Pfaff & Mendall
84 Foundry Street
- *Pierini Tanning & Dyeing Corp.
28 Paris Street
- *A.J. & J.O. Pilar, Inc.
145 Chapel Street
- *Pitt Consol Chemical Co.
191 Doremus Ave.
- Pittas Bakery
184-185 Ferry Street
- *Plastics Industries Corp.
430 Adams Street
- Frank Popola Barrel Co.
16-18 Thronton Street
- Porta Can Corp.
83-85 Malvern Street
- *Precious Metals Specialties Co.
11 Vincent Street

- Prentiss Drug & Chemical Co.,
Inc.
338 Wilson Ave. 07105
- Rab Products Corp.
360 Thomas Street 07114
- *Radel Leather Manufacturing Co.
445 Wilson Ave. 07105
- Red Raven Rubber Company
237 South Street 07114
- *Reddaway Mfg. Co., Inc.
32 Euclid Ave. 07105
- Regal Press Inc.
60 Oliver Street 07105
- Regent Records, Inc.
56 Ferry Street 07105
- *Reliable Japanning & Metal
Finishing Co.
14-22 Ferdon Street 07105
- Remis Industries Inc.
429 Adams Street 07114
- Resin Research Laboratories, Inc.
406 Adams Street 07114
- *L. Reusche & Co.
2 Lister Avenue 07105
- *Revere Smelting & Refining Corp.
387 Avenue P. 07105
- *Lewis Roberts, Inc.
72 Union Street 07105
- *Rondack Wood Crafts, Inc.
55-57 St. Francis St. 07105
- *Ronson Metals Corp.
55 Manufacturers Place 07105
- Roto-Lith, LTD.
102 Monroe Street 07105
- Royal Aluminum Co., Inc.
318 Jefferson Street 07105
- *Seven Up Bottling Co. of Newark
282 Jefferson Street 07105
- *Shelton Mfg. Co., Inc.
591 Ferry Street 07105
- Sherwin-Williams Company
Brown St. and Lister Ave. 07105
- Shifman Bros.
1 Mott Street 07105
- *Shiman Industries Inc.
109 Monroe Street 07105
- Skyron Corp.
2/14 New York Avenue 07105
- *Sleep Aid Bedding Products
132 Pacific Street 07105
- *Sleepmaster Products Co., Inc.
60 Lockwood Street 07105
- Slick Shine Company
222 Thomas Street 07114
- *R. G. Smith Tool & Mfg. Co., Inc.
245 South Street 07114
- *Standard Concrete Block & Supply
Co., Inc.
418-440 Adams Street 07114
- *Standard Embossing Plate Mfg. Co.
121-131 Pulaski Street 07105
- *The Standard Tallow Co.
61 Blanchard Street 07105
- Stanley Tools
140 Chapel Street 07105
- *Star Heel Plate Co., Inc.
187 Christie Street 07105
- *Steel & Alloy Tank Co.
P.O. Box 2009, 300 U.S. Rt.No.
07105
- Strauss Plastic Co., Inc.
111 Gotthart Street 07105

- *Sergeant Chemical Co.
120 Lister Ave. 07105
- Sun Oil Co.
436 Doremus Ave. 07105
- Superior Products Inc.
55 N. J. Railroad Ave. 07105
- Surf Fashions
43 Merchant Street 07105
- *Synthetic Plastics Company
88 St. Francis Street 07105
- Technical Coatings Co.
134 Lister Avenue 07105
- Teddys Provisions
219 Ferry Street 07105
- *Tenax Finishing Products Co.
390 Adams Street 07114
- *Testrite Instruments Co., Inc.
135 Monroe Street 07105
- Theresa Sportwear Co.
109 Monroe Street 07105
- Thomasset Colors Division
120 Lister Avenue 07105
- Trilectron Industries Inc.
338 Ferry Street 07105
- Troy Chemical Corp.
1 Avenue L 07105
- *Troy Rubber Engraving Co.
258 South Street 07105
- *George Ulanet Co.
413-415 Market St. 07105
- *United Fur Cutters
350 South Street 07105
- United Radio Co.
56 Ferry Street 07114
- *Karl Suchomel
35 Esther Street 07105
- United Records Corp.
111 N. J. Railroad Ave. 07105
- *U. S. Industrial Chemicals Co.
300 Doremus Ave. 07105
- *Universal Coatings, Inc.
10 Avenue C 07114
- *Universal Grain Co. of N.J.
425 South Street 07105
- Vacuum Die Casting Corp.
Foot of Pacific Street 07114
- Vulcan Materials Company
600 Doremus Avenue 07105
- *H. V. Walker Coampany
390 Adams Street 07114
- *J. Weiss Printers
25 Bruen Street 07105
- *The Welded Products Co.
336 Raymond Blvd. 07105
- Welding & Cutting Equip. Co.
644 Market Street 07105
- West Products Corp.
236 South Street 07114
- Whittaker Corp.
249 Avenue P 07105
- *H. E. & C. D. Williams Inc.
213-225 Wilson Avenue 07105
- Wire Fabricators & Insulators, Inc.
331 Oliver Street 07105
- Wood Art Products, Corp.
360 Thomas Street 07114
- U. J. Ramelson Co., Inc.
370 Thomas Street 07114